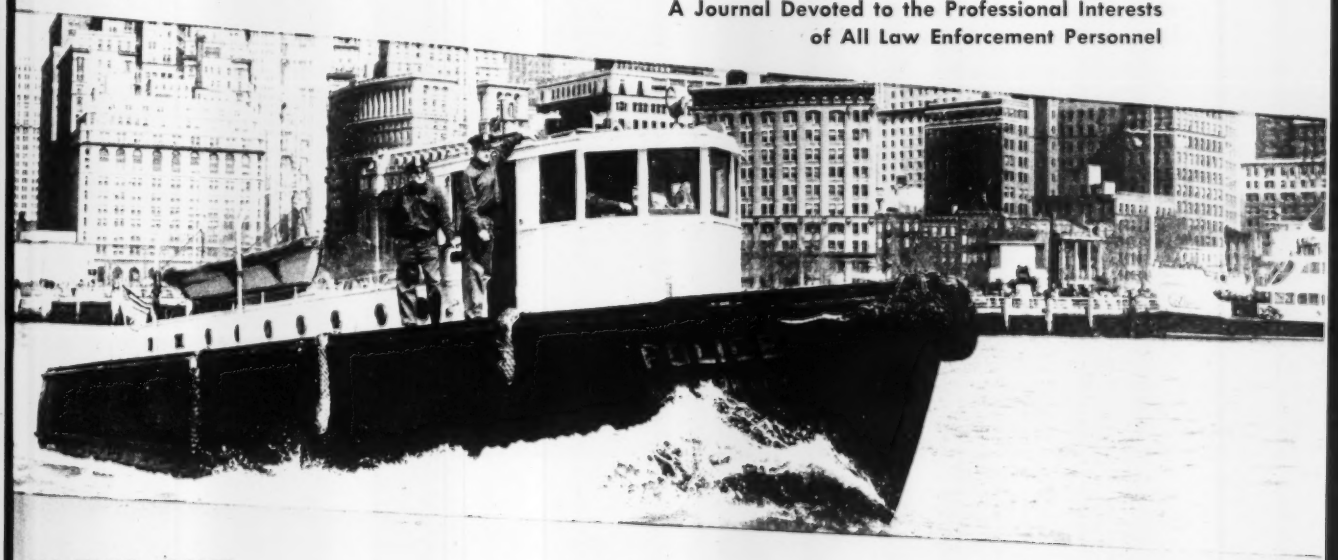
SOCIAL SCIENCES

JULY-AUGUST, 1957

POLICE

A Journal Devoted to the Professional Interests of All Law Enforcement Personnel



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- Water-Tank Bullet Recovery—*W. E. Kirwan*
- Scientific Proof of Credibility—*P. V. Trovillo*

A Sporting Challenge to the Nation's Police Officials

Perhaps you feel that all cars are pretty much alike when it comes to law enforcement work—that there's little difference in how they ride and handle and wear. That's why we're issuing this sporting challenge.

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- Test Dodge Total-Contact Brakes designed to match greater horsepower with greater *stopping* power.

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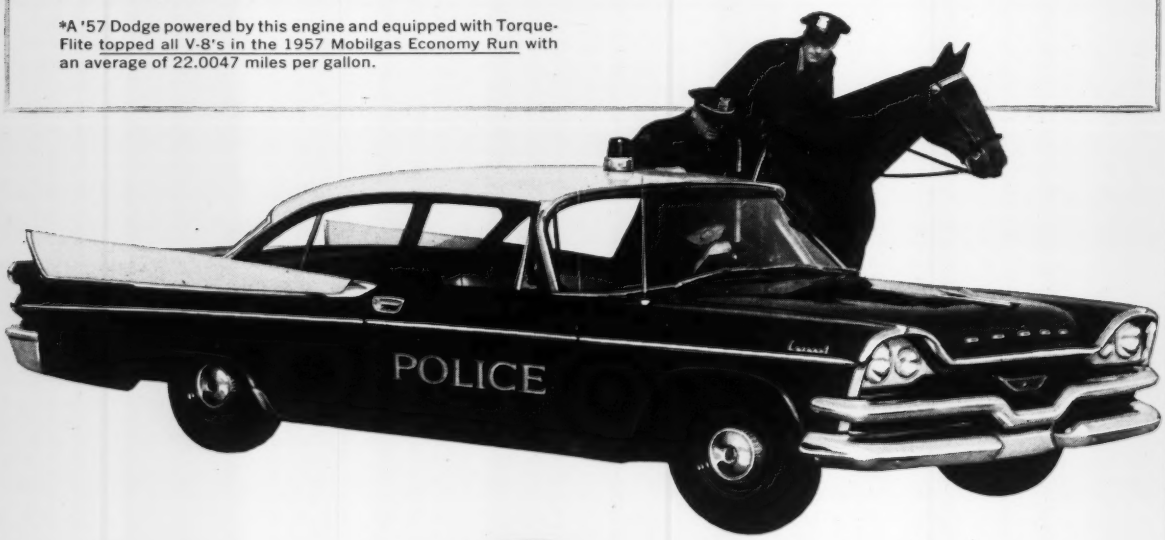

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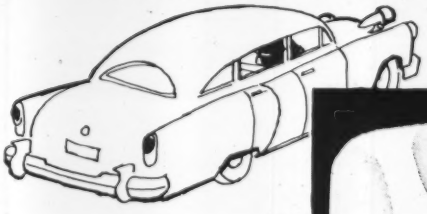

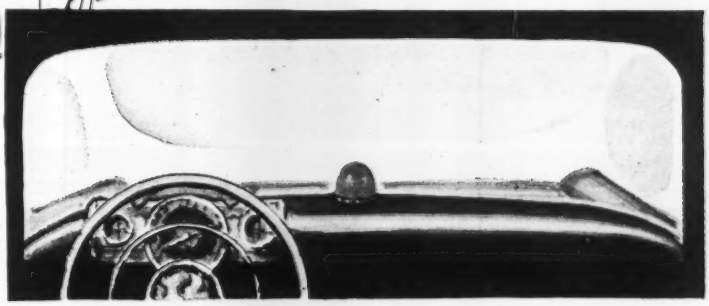

The new Fireball embodies many improvements. One noteworthy addition is its new multi-purpose cover.

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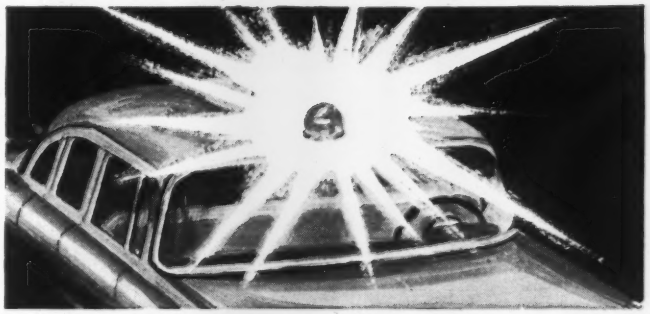

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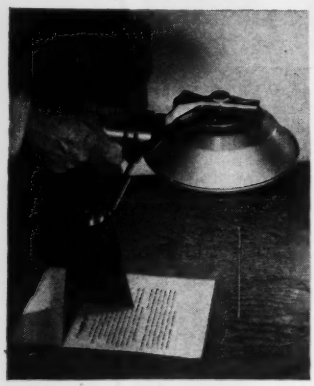
Photograph being taken of latent finger prints on the convex surface of a safe dial.

Reproduction of photograph as taken above (⅝ of original size).

Photograph being taken of a latent finger print on a door knob spindle.

Reproduction of photograph as taken on left (⅝ of original size).



Photograph being taken of typewritten matter and signature.

Reproduction of photograph taken of latent finger prints on two sides of a coin box with one exposure with Faurot Foto-Focuser.

You can now use your Graflex 4" x 5" Speed or Crown Graphic Camera as a Finger Print Camera by simply attaching a FAUROT FOTO-FOCUSER. *Patent Pending

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Regular Departments

IN CASE YOU'RE TRAFFIC MINDED. Original articles and timely information about our Number 1 problem. See page 45.

POLYGRAPH AND INTERROGATION. Research developments, new techniques, procedures, and related subjects concerned with interrogation. See page 36.

IT'S NEW! A preview of new products, techniques, and materials for use in law-enforcement. See next issue.

NEWS AND ANNOUNCEMENTS of interest to all law enforcement personnel. See page 63.

Cover Picture

Summer and vacations! The traffic problem, which is always bad, is more difficult to handle during these months. During the same period there will be many boating accidents and extra work for the water law enforcement officers. Although statistics are against us, we should all try to make a reversal of the picture that is steadily growing worse.

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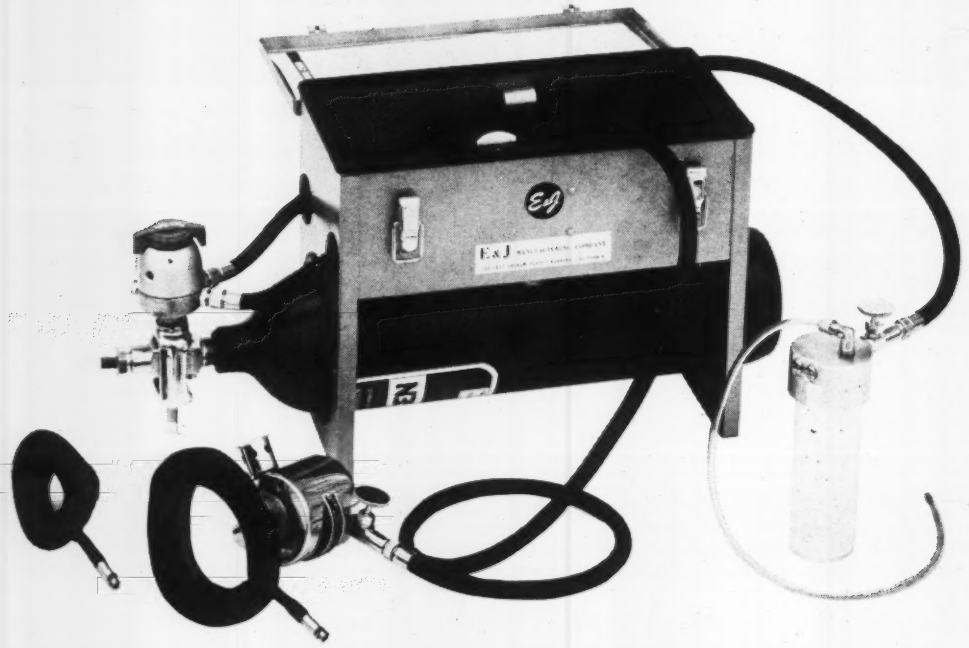
NUMBER 6

1957

JULY
AUGUST

PATROL CAR EMERGENCY BREATHING KIT



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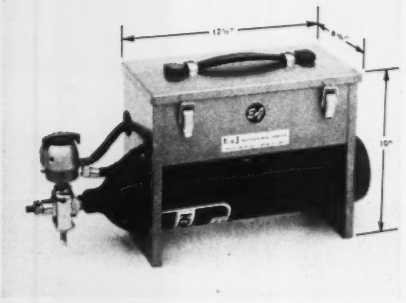

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Resuscitation

By Carl B. Young, Jr.

EDITOR'S NOTE: *Mr. Young holds a B.S. Degree in Health Education from the University of Houston; a Master of Public Health Degree from the University of North Carolina, in addition to research at the University of Texas Medical Branch, Galveston, Texas, in resuscitation and emergency procedures. He was a medic in the 87th Infantry Division Co. A 312, Medical Battalion; and served in the E. T. O. He has been with the American Red Cross in First Aid and Water Safety Services since 1951. Mr. Young was an Assistant Director of the Harris County Emergency Corps, Houston, Texas, and now holds the position as Director, First Aid and Water Safety Services, with the American Red Cross in Corpus Christi, Texas.*

ACCIDENTS which suddenly stop breathing are well known to the police officer. The majority of these accidents are preventable. Especially is this true of gas poisoning, electric shock, submersion and mechanical suffocation. Each department should do their part through community safety programs. Asphyxial accidents claim many citizens each year.

The purpose of this article is not to describe in detail how to render artificial respiration or use a resuscitator. These are best accomplished by the instructor assigned to teach first aid within the department's training division. Instead, a brief review of the important factors to be considered by the officer when faced with a non-breathing victim will be discussed.

Certainly, all officers should be familiar with the new method of artificial respiration, the Back Pressure-Arm Life method. Important, too, are alternate methods which may be employed to adequately force air deep into the lungs when the standard method is not possible, due to injury, or other reason. It may be interesting to know why the new so called "push-pull" methods of manual artificial respiration are so superior to the older methods. The basic reason is: *a larger amount of air, can be forced into the lungs.*

Most important, is to realize, that although we have a much improved method of artificial respiration, there still remains a few essential key factors on which the difference between success or failure depend. These are: immediate clearing of the air pathways and immediate application of manual resuscitation. Also, this must be carried out at the accident scene. When breathing stops, the period of time remaining before heart action ceases and death occurs is measured, too often, in seconds.

Resuscitation is often thought of as if it were the restarting of a machine that has stopped. Actually, the vital machine cannot be restarted if it has fully stopped. It is not like an automobile motor, to be restarted by "cranking." Resuscitation prevents the body's machine from coming to a full stop. Successful resuscitation returns to normal operation a motor that has almost but not completely "stalled."

Following an accident or acute condition which results in abrupt breath stoppage, the immediate application of manual artificial respiration is all that stands between the stricken victim and certain death. While it is never possible to save every case—it is possible to give every case of sudden acute asphyxia every possible chance by manual resuscitation. As an officer so many times is the first qualified person to arrive on the accident scene, his responsibility includes the "know how" of resuscitation measures.

The emergency procedure which is carried out depends largely on the situation found on arrival at the scene. No two cases are ever identical. If, on arrival, there is no first aid being rendered, or if that being rendered is not correct, take immediate charge of the victim. When a fellow worker or bystander is doing an adequate first aid job, encourage him. Let him know that you are there to help.

Additional measures of importance are: check the breathing pathways, see that the victim is covered both over and under, place a call for the agency of the city government which has an emergency squad (usually the Fire Department), and summon a physician and ambulance. The curious should always be kept well back. In many cases of an asphyxial nature, there is the possibility of danger still present to others.

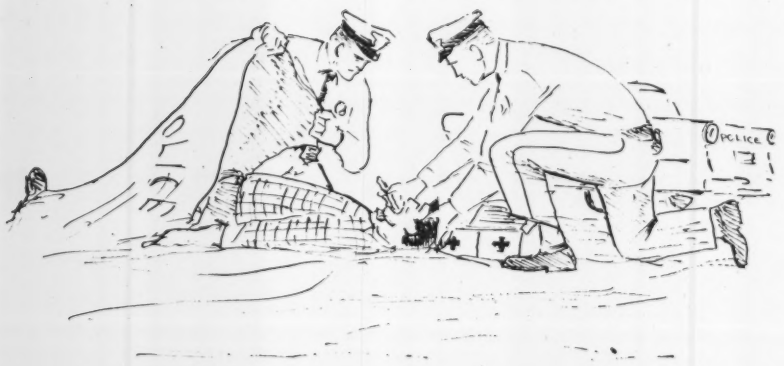
Resuscitation measures should be maintained, at the scene until: (1) normal breathing resumes; (2) a medical doctor pronounces the person dead, or (3) until rigor mortis sets in. Many people have been successfully revived after several hours of resuscitation. The majority of victims recover within the first thirty minutes. Thus, the importance of prompt, on the scene care.

To move a non-breathing patient into an ambulance and rush him madly to a hospital is certain death. Only by resuscitation measures can needed oxygen be forced into the lungs. A qualified emergency crew can, when using a mechanical resuscitator, safely move a patient and transport him to the hospital (breathing is continued without interruption during the trip by the resuscitator).

All cases successfully resuscitated should be kept level and warm. They should be *quietly* transported to a hospital, oxygen inhalation con-

Address: Mr. Carl B. Young, Jr., Director, First Aid and Water Safety, The American Red Cross, P. O. Box 1758, Corpus Christi, Texas.

Illustrations are by Richard Fry.



tinued as indicated. All such cases should be accompanied in the rear of the ambulance and constantly observed, so that if breathing stops again or they vomit, help is available. There is no reason for great haste and a noisy ambulance ride to the hospital. It accomplishes nothing and can be detrimental to one who has already had his heart taxed to the utmost.

The mechanical resuscitator is superior to manual resuscitation and should always be employed just as soon as one is available. However, while waiting for a resuscitator, manual methods must be continued without let up. A resuscitator forces 100 per cent of oxygen deep into the lungs. The air forced in by artificial respiration contains only some 21 per cent oxygen. A mechanical resuscitator is only as effective as the knowledge and training of the operator.

When there are fractures of the upper extremities, it would be wise to employ the hip roll or hip lift method. Both of these are very effective in forcing large amounts of air, deep into the lungs. When it is necessary for the victim to be on his back due to injury or being pinioned down, the modified silvester method should be used.

A demonstration of the various alternate methods as well as a review of the standard method of artificial respiration should be given by the department instructor. A practice session should also be held. Practice of these skills will pay off in the saving of life.

It may thus be seen that resuscitation *does not* mean bringing a person *back to life*. Instead, resuscitation, to be successful, must be accomplished while there is *still life* and before *death sets in*. Resuscitation fans the one remaining spark of life, which, if adequately encouraged, will flare up again to save the victim.

Police officers across the nation have saved many lives by prompt artificial respiration. They are to be highly complimented for their fine work in the life saving field. ★★★

Water-Tank Bullet Recovery

A MEANS OF OBTAINING FIRED BULLET SPECIMENS FOR COMPARISON

By William E. Kirwan and A. B. Hart

THE identification of a firearm that fired an evidence bullet is one of the major functions of a police laboratory. It is based on a comparison of the microscopic markings impressed on the bullet by the rifled bore of the firearm. A test bullet fired through the barrel of the suspected firearm is microscopically compared with the evidence bullet.

DIFFICULTIES OF COMPARISON

The theory appears extremely simple. However, its application is attended by much difficulty. First, the courts have consistently ruled that "all scientific tests must be conducted under conditions comparable to that which existed at the time of the alleged crime." This demands that the ammunition used in the test firing be comparable to that used in the crime. This, in turn, demands identification of the ammunition by examination of the evidence bullet and/or the evidence cartridge case. It further demands that after identification of the ammunition, the comparable ammunition in the test firing must be used as it comes from the manufacturer. No reduction in powder charge, nor change in bullet weight, nor substitution of any kind is permitted. The reasons for such judicial insistence are simple. Test bullets fired under reduced powder charges, bullets manually pushed through a barrel, or different types of bullets (lead, copper-gilded lead, or metal-cased bullets) will not show the true reproduction of the microscopic markings essential for identification.

Second, the test bullets must be recovered in the most perfect condition possible. Recovery of test bullets has always been a serious problem to firearm examiners.

The best discussion of the latter problem that has come to our attention is the article "Bullet Recovery," by Inspector J. A. Churchman, M.M., F.R.M.S., of the Royal Canadian Mounted Police, which originally appeared in Vol. 9, No. 7, of the Royal Canadian Mounted Police *Gazette*. (Inspector Churchman has since been appointed to the rank of Superintendent, and is the Officer in Charge of the Crime Detection Laboratories of the Royal Canadian Mounted Police.) In his article, he discusses the various experiments conducted by leading authorities attempting to find the perfect method of bullet recovery:

"The various experiments conducted in the past were:

1. *Recovery by vertical firing into the air.* The theory is that upon exhaustion of the velocity of the bullet, it will drop to the ground in the same line in which it was fired upwards. The many experiments reported clearly indicate the correctness of the theory as well as the serious difficulties present.

2. *Recovery by firing when the firearm is being propelled backwards at a speed equal to the muzzle velocity of the bullet.* This should permit the bullet to drop to the ground. So many obvious reasons make such procedure out of the question.

3. *Recovery by firing into cotton waste or absorbent cotton.* This method is widely used by firearms examiners. Satisfactory test bullets can be recovered, but here again several difficulties are encountered.

4. *Recovery by firing into snow.* Mutilation of the test bullets was found, even when ideal weather and snow conditions were present, the latter a rare phenomenon and, obviously, not always present.

5. *Recovery by firing into oiled sawdust.* Very good results can be obtained if a proper sawdust and oil mixture is used.

6. *Recovery by firing into flesh or meat.* This, theoretically, should provide for the perfect method, as it duplicates the crime conditions. However, there is the danger of complete penetration or distortion and mutilation of the bullet by contact with bone. Then, too, the high cost of meat would be a deterring factor.

7. *Recovery by firing into wax media.* Distortion of test bullets, and the difficulty of locating the bullet in the recovery media, are a few of the difficulties encountered.

8. *Recovery by firing into water.*

Vertical firing—The Royal Canadian Mounted Police have found that firing high-velocity rifle bullets vertically downward produced a hydrodynamic effect that was usually disastrous to the water container. The splash was also a serious consideration.

Horizontal firing—The first of a series of tests conducted by the Royal Canadian Mounted Police involved firing through a self-sealing membrane into a horizontal tank of water. Results were promising, but it was found that lead bullets were inclined to flatten and were wiped

Address: William E. Kirwan is Director of the New York State Police Scientific Laboratory at Albany; A. B. Hart, New York State Police Technical Sergeant, is assigned to the Scientific Laboratory as firearms identification expert.

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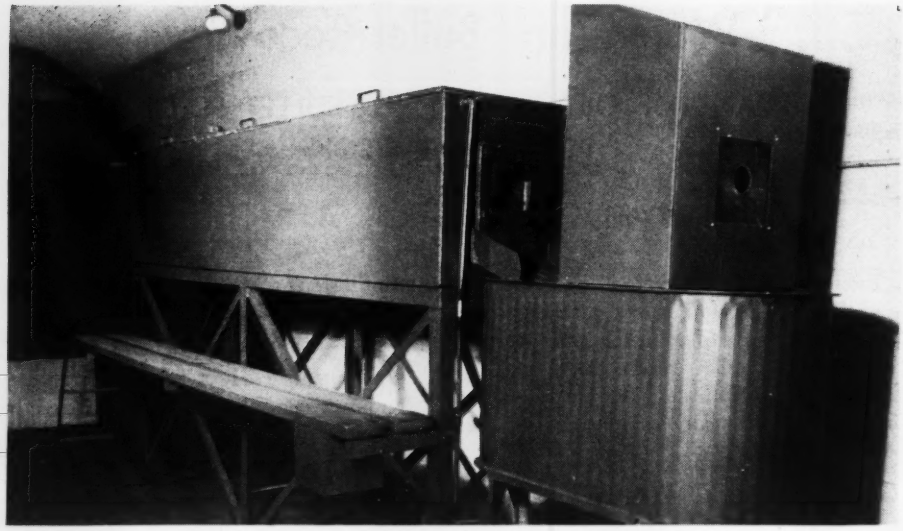
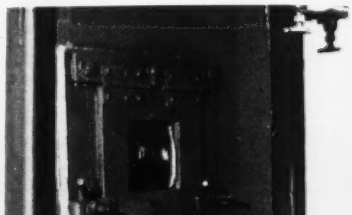


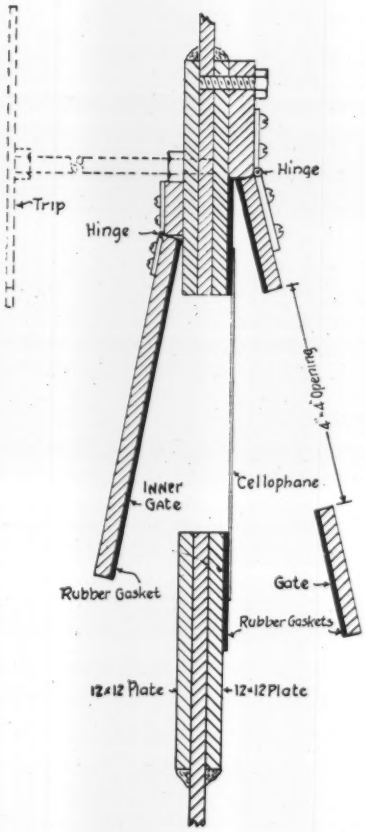
The New York State Police tank measures 10 x 2 x 2 feet. It is made of ¼-inch steel plate welded at the corners, cross-braced, and supported on a strong angle-iron stand. In front of the recovery tank is placed a spill tank, surmounted by a splash shield. A ¼-inch steel baffle plate is hung at the rear end of the recovery tank to stop any deeply penetrating bullets. Three sheet metal covers, supported on cross braces, prevent splash of water. A catwalk alongside provides easy access to every part of the tank. A ball of plasticene or wax on the end of a stick will pick up a bullet from the bottom of the tank. Lights inside the tank have been found desirable for boresighting the arms to be tested, but are not a necessity.



The outside gate and the membrane through which the shot is fired. The cellophane membrane (No. 300 MST—thickness about .0008") is placed under the gate which is then clamped down with the dogs shown.

The spill tank and splash shield are set between the firer and the recovery tank. The spill tank is an inexpensive water trough about 44 inches long by 22 inches high by 20 inches wide, on a one-inch angle-iron stand. A spill chute beneath the gate mechanism directs the water into the spill tank. A drain in the bottom empties the spill tank automatically. The splash shield, of sheet metal, fits on the open spill tank. An 8 x 8-inch plexiglass panel with a 2½-inch hole is fitted into the end of the shield.

Inner gate and trip, as seen from inside the tank. Gate is open, ready for the shot. Gate is automatically closed immediately following the shot.

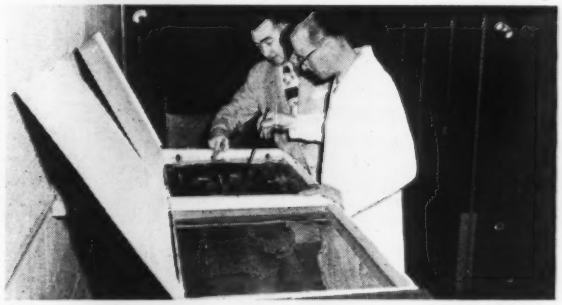


Section through gate mechanism. The outer gate (r.) is shown partly raised for placing of the cellophane membrane, after which it is clamped down. The inner gate (l.), also shown partly raised, is raised by hand to the horizontal and held there by the trip indicated. At the shot, the disturbance in the water causes the trip to release the inner gate, which under the forces of gravity and hydraulic pressure drops and seals the opening. Its reaction is so rapid that only one gallon of water is lost at each shot.

as they passed through the self-sealing material. Shooting through panes of glass overcame this difficulty, but an automatic gate to close off the water flowing from the tank became necessary. Finally, sheets of cellophane, less than one thousandth of an inch thick, were used. The only serious difficulty now remaining is the recovery of high-velocity soft-point bullets. Such bullets recovered in water are badly mutilated, but still can be used for comparison purposes. Therefore, the Royal Canadian Mounted Police usually resort to the recovery of such bullets in oiled sawdust."

The above-mentioned article should be consulted for the very interesting details that could not be included here.

From the idea presented by Superintendent Churchman and through the excellent cooperation extended by the Royal Canadian Mounted Police, the New York State Police Scientific Laboratory designed and had constructed a similar horizontal water tank for bullet recovery. Both general construction details are shown in the illustrations.



William E. Kirwan (l.) points out location of test bullet to Sergeant Hart. Stick in Hart's hand is tipped with wax for picking bullet from bottom of tank.

The purpose for which the tank is intended will determine the weight of material that must be used. A 20-gauge galvanized sheet metal tank has proven satisfactory for recovery of pistol, revolver, and low-powered rifle bullets. However, a .303 soft-point or similar projectile might ruin such a tank.

In our ¼-inch steel plate tank, we have recovered bullets from .357 Magnum revolvers and .32 Winchester Special rifles with no apparent damage to the water tank. If it is desired to recover highest velocity rifle bullets, it is suggested that a substantial tank of ¼-inch steel or better be reinforced with a good thickness of concrete. At the present time, no one has made any recommendation as to what thickness of concrete would be necessary to withstand the enormous pressures developed.

For the purpose of scientific criminal investigation, we in the New York State Police Laboratory have found the present water tank highly satisfactory. ★★★

CALIFORNIA ARSON AND FIRE INVESTIGATION SEMINAR

The Fourth Annual Arson and Fire Investigation Seminar was held June 10-14, 1957, at the University of California, Los Angeles, California.

The course was intended for officials and members of Fire Departments; Law Enforcement Agencies; Industrial Protection Departments; Local, State, and Federal Government Agencies; Fire Prevention Representatives; Insurance Underwriters; Adjusters; and Persons Directly Interested in Arson Control and Prevention.

The purpose of the course was to provide broad general information, specific investigative techniques, and consideration of those detailed subjects that lead to more effective detection, apprehension, prosecution, and conviction of the arsonist.

Sponsors were the California Fire Training Program and University Extension, University of California.

Further details may be obtained from Mr. Tom Ward, Supervisor of Fire Training, Department of Education, State of California, State Education Building, 721 Capitol Avenue, Sacramento, California.

The 'Finest' on Horseback

By Philip Benjamin

JUST about the most valuable anachronisms on New York's roster of public servants are the sleek, well-groomed, well-trained and well-respected operatives of the Police Department's mounted division.

These specifications apply equally to the policeman and to his horse. A compound of *esprit de corps* and spit-and-polish, the division is an elite that has been getting smaller year by year.

But the mounted police will be clattering along city streets for a long time in spite of the wheels of progress and of motor vehicles—or even because of them. That word came straight from Police Commissioner Stephen P. Kennedy recently when he asked the City Planning Commission for a new $370,000 stable near Borough Hall, Brooklyn, for the mounted division—or, officially, district.

The Police Department spends $200,000 a year to maintain the mounted force, which has a complement of 250 patrolmen, twenty-nine officers, and 258 horses kept in eleven stables, including private livery stables, throughout the five boroughs. Police officials figure the mounted district is worth its weight —330,000 pounds of men and horses —in gold.

"A horse is worth twenty men when it comes to handling unruly crowds," Commissioner Kennedy says.

"We're the best thing for handling traffic," says Inspector James P. Dermody, commander of the mounted force.

The reason is fairly obvious. People instinctively respect the size and weight of a horse. They also respect the man riding him. Some buffs of both psychology and the mounted division say such respect goes back to the days of the horsed lord of the manor and the unhorsed peasant.

Atavism or not, the efficacy of mounted policemen is demonstrated over and over again in strikes and riots. In an incident some years ago rioters scattered marbles over the streets, hoping to make the horses fall.

"All that happened," a patrolman recalled, "was that the horses crushed the 'immies' to powder and the rioters were arrested for littering the streets."

A veteran mounted man summed up the value of horses in controlling crowds this way: "I've heard of angry crowds overturning an automobile, but I've never heard of anyone overturning a horse."

Mounted police have proved particularly valuable in less violent situations. A crowd can assemble peacefully enough, but get out of hand through sheer numbers.

An example of this was the 1954 Washington's Birthday sale held by Hearn's Department Store, then on Fourteenth Street. Hearn's had announced a day of "crazy bargains" in the newspapers, with two television sets going for $6.95, among other plums. At dawn on the holiday 10,000 people jammed Fourteenth Street between Fifth Avenue and the Avenue of the Americas hours before the store was to open. There was danger that people would be pushed through plate glass windows or stepped on. Ten mounted policemen called to the scene found fifty foot patrolmen struggling to keep the crowds in check. With their horses, the ten mounted men "bent" the crowd into orderly lines. Not a foot was stepped on—at least not by the horses.

The following year the mounted force was on hand when Hearn's repeated its bargain day. There was no trouble. Since then the police have watched newspapers closely for announcements of unusual store sales, so they can assign mounted patrolmen to areas of retail combat.

Mounted policemen are also valuable in patrolling congested areas such as the garment center and the theatre district. On a horse a man can easily spot a traffic bottleneck from a considerable distance—and can be seen easily by motorists.

Horsemen also cover New York's waterfront, mostly to control traffic. But when ships bearing survivors of the collision between the *Andrea Doria* and the *Stockholm* arrived extra mounted patrolmen were dispatched to handle the crowds around the piers.

Mounted policemen who patrol parks and bridle paths often stop runaway horses and frequently find riderless horses abandoned on bridle paths by "free riders"—horsemen who don't go back to the stable to pay up.

But the romantics who ask mounted patrolmen about rescuing beautiful heiresses on runaway horses are disappointed. The stark fact is that few if any heiresses, beautiful or otherwise, are found on park bridle paths these days. "The proletariat has taken over," one old-timer in the mounted division put it.

The mounted men do, however, get their share of contact with the famous. The division always turns

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Address: Mr. Philip Benjamin, *The New York Times,* New York City, New York.

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WATERFRONT PATROL: *Mounted police move in to help foot patrolmen restrain pickets during a longshoremen's strike. "A horse," says New York City's Police Commissioner Stephen P. Kennedy, "is worth twenty men when it comes to handling unruly crowds."*

out a cavalry escort for dignitaries, foreign and domestic. At mounted district headquarters, 230 West Twentieth Street, flags of forty nations are kept on hand. Every year the flag of the Irish is broken out for the St. Patrick's Day parade and the Italian flag for Columbus Day.

If the head of the division is in Twentieth Street, the heart is at the remount depot in the New York National Guard Armory at Madison Avenue and Ninety-fourth Street. Here, in a vast dirt-covered arena, horses and men are schooled. In charge of the depot is Lieut. Frank Murphy, who has spent fifteen of his nineteen years on the force in the mounted division.

Recently, Lieutenant Murphy stood in the riding ring watching two assistants working two bay geldings, Brown Beau and Governor. (All police mounts are bay—reddish brown—geldings with uncropped tails and manes. Bay has been the color since the division was added

NIGHT PATROL: *Policemen on horses can readily spot traffic bottlenecks and are easily seen by motorists. Here mounties in the Times Square area direct after-theater traffic.*

ROLL CALL: *Policemen and mounts of Troop B line up for assignment to duty in the Times Square area.*

to the force in 1871.) "We've got to keep working the horses, keep after them," Lieutenant Murphy said. "If they're idle, they get fractious. They're western horses. Rebellious."

Most of the horses are bought at auctions in Oklahoma. They cost about $300 each, and must be between 4 and 8 years old, intelligent, easy of temperament, free of bad habits and of good conformation. Each horse must weigh between 1,000 and 1,200 pounds and stand not less than 15 to 16 hands high—about 61.2 to 64.8 inches from the withers (the point where the neck joins the shoulder) to the ground. Twenty to twenty-five mounts are bought yearly to replace those that reach retirement age—20 years old.

All police horses are taught to back up, to teach them balance. They are also taught to "pass sideways," a maneuver which enables a mounted patrolman to move crowds back by easing his horse's shoulder against them. Perhaps most important, the horses are trained not to shy at sudden movement. This is done by having trainers rush at them yelling, waving papers and banging sticks together. When a horse gets to the point at which it merely yawns at such antics, it is ready for the street. Accompanied by older, city slicker horses, it will be assigned first to comparatively quiet places until it becomes used to traffic and crowds.

Even after horses are retired, they often remain useful. Some are sent to the Department of Health laboratory at Otisville, N. Y., where their blood is used to provide tetanus antitoxin and other serums. Others are given to people able to take care of them. The department has on file hundreds of letters from farm children who would like a horse—a commentary on the mechanized state of today's farms.

Training is just as intensive for the men. Most of those who join the mounted district have never ridden before. It's just as well, according to Murphy. "The men haven't acquired any bad riding habits," he said, in an unconscious pun, "and we can teach them our own way."

New men train for thirty days, then go on patrol with experienced riders. A recruit must be under 30 years of age and weigh not more than 165 pounds. For the privilege of being a man on horseback, he pays in time and money. He arrives at the stable well ahead of turnout time and leaves well after his tour is over. For, though twenty-six civilian hostlers are employed to groom the horses, the patrolman often takes a hand in the work. In addition, he has to take care of his saddle and other tack.

He pays more for uniforms than do foot patrolmen. In a year he wears out two or three pairs of breeches, which cost about $30 a pair. He buys Sam Browne belts, black leather puttees and brass spurs.

His duty can be hazardous. Mounted patrolmen have chased—and caught—hold-up men. Not long ago members of the division broke up a teen-age gang war by riding in pairs after some of the youngsters and scooping them up by their shirts. Even when crime is not involved, there's always danger: horses slip, throw their riders, blunder into obstacles. This doesn't happen often, but mounted patrolmen do receive their share of injuries through accidents.

Some, happily, are more humorous than harmful. A patrolman once dismounted to chase a thief into a subway station. The horse followed his rider down the steps, only to get stuck. Traffic was held up until the faithful horse could be eased back to the surface.

And there was the case of the disappearing mount. When a policeman on tour wants to eat, he has to make sure his horse is safely tethered, usually in a garage. One who did so found, when he returned to the garage, that his horse was gone. Then, from aloft, he heard a piteous neigh; he looked up to see his horse sticking his head out of a fourth-floor window. The patrolman had tied his mount on an automobile elevator, and the horse had inadvertently nuzzled the "up" button.

★★★

The Measurement of Rifling Characteristics of Firearms

By J. H. Mathews

EDITOR'S NOTE: *Professor Mathews of the University of Wisconsin is well known throughout the American law enforcement field for his contributions in the application of the laboratory sciences to the solution of criminal cases. His participation in the solving of a celebrated murder case in 1925 opened the doors for the development of Scientific Methods of Crime Detection and paved the way for the Crime Laboratory as we know it today. He has played a major role in solving many baffling criminal cases and has served as an expert witness in Court on innumerable occasions. His lectures on Scientific Crime Detection are familiar to readers from coast to coast. A long and distinguished career has included the Ph.D. degree in Chemistry at Harvard University in 1908 and veteran service as a member of the faculty at the University of Wisconsin. He was commissioned Captain in the Ordnance Department in 1917 and served overseas in France and England on a special assignment to study the use of poison gas in warfare, both in offense and defense. He left the service in 1918 with the rank of Lieutenant Colonel, Chemical Warfare Service, Reserve. He was appointed Professor of Chemistry and Chairman of the Department of Chemistry at the University of Wisconsin in 1919 and held this position until his retirement as Professor Emeritus in 1952.*

Since that time, he has been devoting all of his attention to the study of the rifling characteristics of hand firearms, revolvers, pistols and automatics. He has measured over 2,000 specimens from 23 countries and over 1,000 have been photographed. The results of this study will prove invaluable to experts who are called upon to solve crimes committed with firearms.

In the following article written exclusively for POLICE, *Professor Mathews describes the work that he is now doing and* ISSUES THIS STRONG APPEAL TO ALL LAW ENFORCEMENT PERSONNEL, FIREARMS EXPERTS, GUNSMITHS AND GUN COLLECTORS THROUGHOUT THE COUNTRY *to send in to him for examination and measurement any unusual or uncommon guns which may be in their possession. (They will be returned to the sender promptly.) The Journal urges everyone possessing a gun that is unusual in any way with respect to make, design, calibre or other characteristics, to send it in for measurement to Professor J. H. Mathews, Department of Chemistry, University of Wisconsin, Madison 6, Wisconsin.*

ALL firearms examiners and most law enforcement officers are quite well aware of the fact that a fired bullet may give very important information. Probably all of them now know that fired bullets bear markings which, when studied by a competent investigator, may tie the bullet positively to a particular gun. This is because the markings on two bullets fired from the same gun usually show distinctive markings which are *repetitive*, i.e., appear on every bullet fired from that particular rifled barrel and none other. A considerably lesser number of law enforcement officers, however, know that by making certain observations and measurements on a fired bullet an expert can often give valuable information as to the make (and often the model) of the gun that fired that bullet. It is true that every gun has an individuality and that the interior surfaces of no two guns are ever exactly alike, but it is also true that in many cases there are certain "class characteristics" which help to indicate the make and model in case the barrel is a "rifled" barrel. Frequently there are cases where there is only an evidence bullet and no suspect gun. In such cases the class characteristics may be very useful in narrowing down the search.

Fortunately different firearms manufacturers have different ideas as to what specifications should be followed in order to produce a good firearm, for if they all followed the same specifications the expert could not be of much assistance in determining the make and model used. Obviously if the expert could say unqualifiedly that a certain make and model of a certain caliber had been used, the search for the weapon would be tremendously simplified in many cases. Unfortunately it is not that simple, particularly for the following reasons:

1. Many cheap foreign guns, thousands of which are in circulation, were not made according to any known specifications, and probably none existed in a great many instances. This is particularly true of the many Spanish guns made before Franco limited the production to three manufacturers.

2. Very frequently, while very exact specifications have been adopted by a manufacturer, these specifications have not been followed. It is often quite unsafe for the expert to assume that they are being followed exactly.

3. Often the specifications (and practices) of two or more different manufacturers are so near to being the same as to make it impossible to state that the evidence bullet was fired from a specific make of gun. But at least the search can be narrowed.

4. In many cases specifications are no longer available and the class characteristics are unknown. In a great number of cases manufacture of the gun was ceased many years ago and records have been destroyed, intentionally or otherwise. One manufacturer has lost records on three occasions—twice by fire and once by flood.

5. In a very few cases manufacturers do not cooperate in furnishing specifications.

Address: Professor J. H. Mathews, Department of Chemistry, University of Wisconsin, Madison 6, Wisconsin.

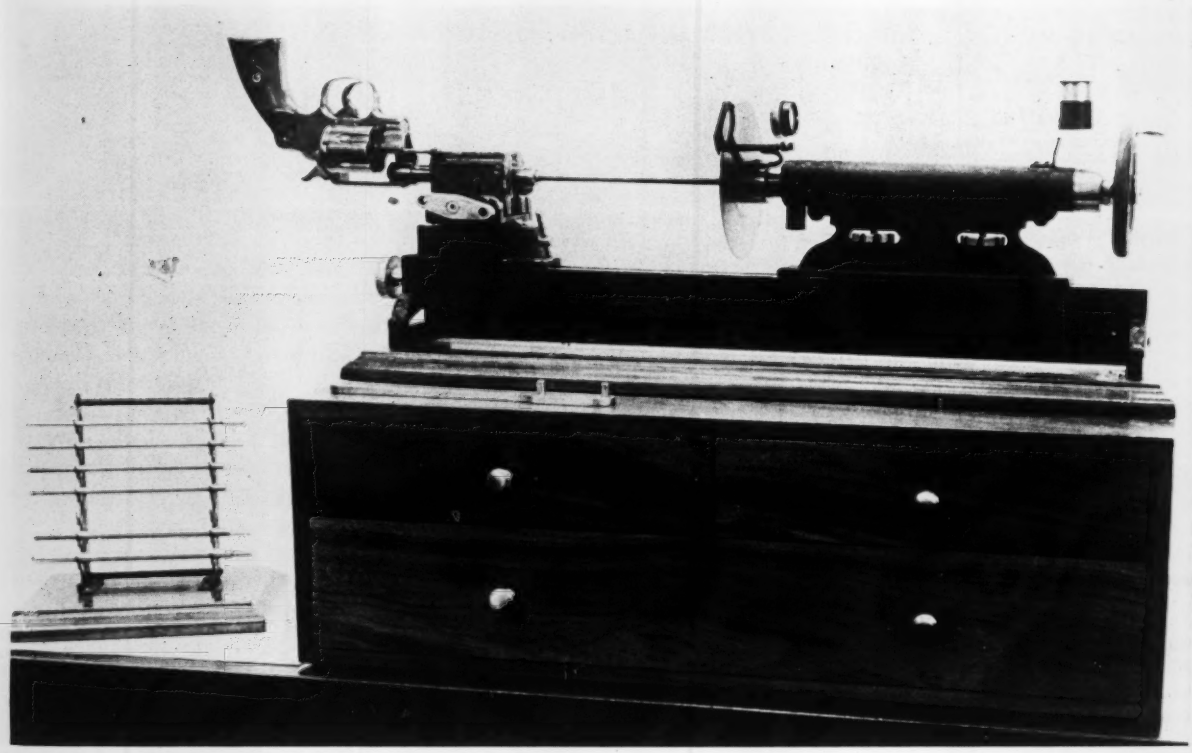


FIGURE 1. RIFLING METER. *A lead disk, 1/16" thick and cut to proper size (in a punch press not shown), is forced through the barrel by turning the wheel at the right end. The drum at the right end is calibrated into 100 divisions, each division representing 0.001". One complete turn of the hand wheel advances the disk 0.1". Readings of rotation are made on the graduated circle, by aid of the vernier, at intervals of 0.2" to 1.0" depending on length of barrel.*

6. And, finally, in many cases the bullet is so battered and mutilated that the necessary measurements and observations cannot be made for comparison with known values.

The only way to learn the class characteristics of many rifled guns and surely the only certain way to find out what the manufacturer *actually did* in practice is to measure as many as possible of each specimen as can be obtained and which still are in condition to be measured. If the rifling is not in sufficiently good condition to be measured with a high degree of certainty the measurements had best not be made. We already have enough misleading data.

The desirability of making many measurements cannot be overemphasized. Some investigators have made what were probably reasonably accurate measurements on *one single* specimen of a given make and model and have apparently assumed that *all* of the guns of this make and model had exactly the same dimensions. Consequently the tables prepared from such limited data may give very erroneous information. Obviously one cannot expect to measure a large number of specimens of each and every one of the thousands of makes and models of guns that have been made in the last 100 years or so, desirable as that might be. But at least an effort should be made in that direction! Some guns are now so rare that one may be lucky to get even one specimen—and in many cases he will get none at all. But guns which are as rare as that are certainly not so likely to be used by the criminal—which is a consoling thought, though not necessarily a correct one! The expert must remember that the possibility that a rare gun may have been used exists. In one case I was able to tell the Police that they should look for a 6.35 mm. Bergmann, a gun which is by no means common. Three months later they located a 6.35 cal. Bergmann and it proved to be the murder weapon and the murderer confessed and was given a life sentence.

From what has been said above the reader may be tempted to conclude that class characteristics are of little value. This conclusion would be erroneous because even though a knowledge of these characteristics may serve to bring only a small percentage of criminals to justice, as in the case cited above where there was absolutely no other clue, it certainly is worth while. And as a matter of fact it could and would no doubt be used more frequently if ample data on a very great number of firearms were available. It is very apparent that a large amount of data are needed and that the possibilities and limitations both be realized.

The purpose of the investigations which have been

going on in my laboratory for several years is to (1) further our knowledge regarding the rifling characteristics of all of the hand guns that are likely to be encountered; (2) to provide photographs which will be useful in identifying a very large number of makes and models; (3) to provide information as to Trade Marks and other identifying marks, and to (4) acquire general information regarding a great variety of hand guns. Many of the guns which have been measured and photographed are not likely to be used in a criminal way but gun collectors will surely find the material interesting and useful. And the possibility exists that a clever criminal might use a very uncommon gun!

The rifling characteristics which are of value are the following:

1. Caliber (i.e., diameter of bore before the rifling grooves are cut).
2. Number of Lands and Grooves. In hand guns this may be 3, 4, 5, 6, 7, 8.
3. Direction of the rifling twist.
4. Degree of pitch of rifling. (Ordinarily expressed in number of inches for one complete turn.)
5. Width of lands and grooves. (These vary over a very wide range.)
6. Depth of grooves. (Less important than the first four.)

It is evident that there may be a great many combinations of these individual characteristics and because of this fact it is often possible for the expert to give the peace officer important information as to what make (and sometimes model) of gun he should look for. Inasmuch as the manufacturer may have several or even many models—and frequently bearing different names—and because many of these concerns have gone out of business (but the guns still exist and are still in circulation) it is obvious that for reasons stated, and still others could be given, the problem can be solved only by painstakingly measuring the characteristics in a very large number of existing guns.

Special instruments and techniques have been devised for the measurements that have to be made. An instrument known as the rifling meter (designed and constructed in our shop) is used to measure accurately the pitch of rifling in the gun. It is shown in Figure 1. This instrument has been described fully in the *Journal of Criminal Law and Criminology, Police Science Section,* Vol. 35, p. 134, 1944. A lead disk is pushed through the barrel by means of an accurately calibrated screw and measurements of the angular rotation of the disk (which follows the rifling) are made at any desired interval of barrel length—0.1″, 0.2″, 0.5″ or 1.0″, depending on the length of barrel. The following table shows two sets of measurements.

A special technique has also been developed for measuring the width of lands and grooves and the instrument is shown in Figure 2. This instrument and its use have

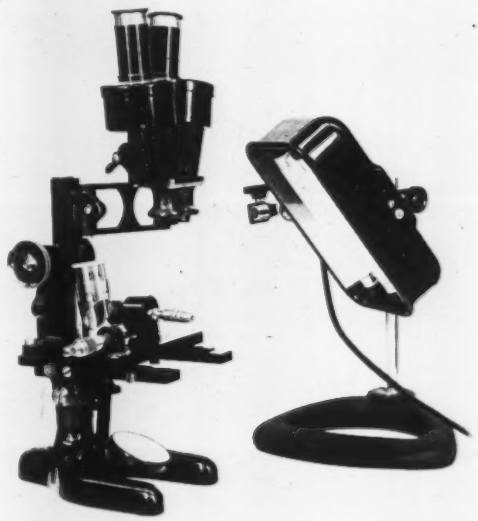
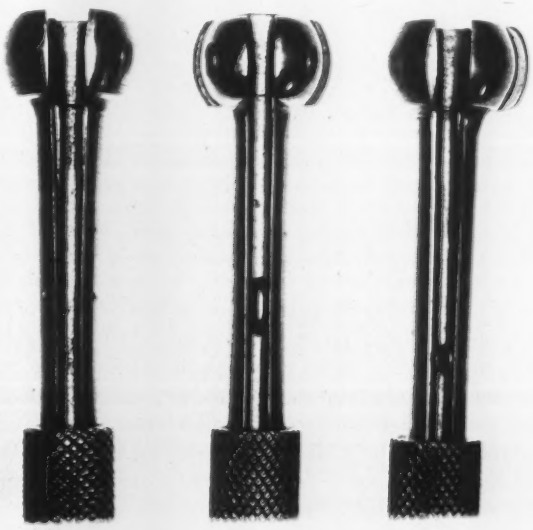


FIGURE 2. GROOVE MEASUREMENT. *Instrument for measuring width of grooves on disk, or on fired bullets.*

FIGURE 3. GAUGES FOR BORE MEASUREMENTS. *One set (3) of modified Starrett gauges.* At left: *Regular Starrett small hole gauge.* Center: *Gauge with oppositely placed "fins," used for measuring groove diameter in bbls. having even number of grooves.* At right: *Gauge with only one "fin," used to measure distance from bottom of groove to top of opposite land.*
(Three such sets, of different size, are required.)



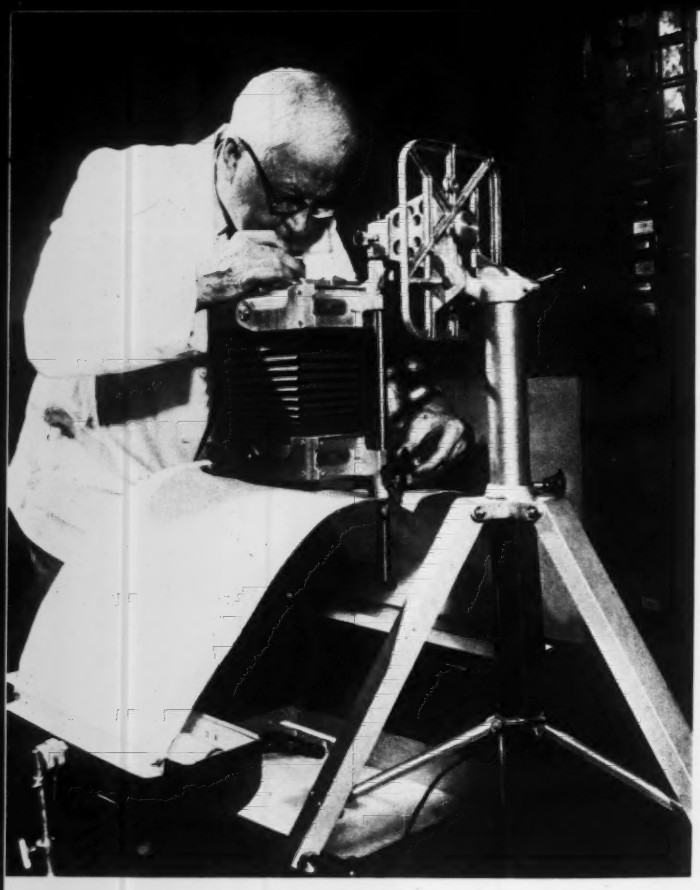


FIGURE 4. SET-UP FOR GUN PHOTOGRAPHY. *(Lights were not turned on in this "posed" photo.)*

RIFLING METER MEASUREMENTS

Savage Automatic No. 72146			*Krieghoff 9 mm. Luger No. 1740*		
0″	31.15°		0″	45.75°	
1/2″	46.15	15.00°	.2″	53.05	7.30°
1″	61.15	15.00	.4″	60.40	7.35
1 1/2″	76.15	15.00	.6″	67.70	7.30
2″	91.15	15.00	.8″	75.05	7.35
2 1/2″	106.15	15.00	1.0″	82.40	7.35
			1.2″	89.70	7.30
			1.4″	97.05	7.35
Av. = 15.00° for 1/2″			1.6″	104.35	7.30
= 30.00 for 1″			1.8″	111.65	7.30
			2.0″	119.00	7.35
360			2.2″	126.30	7.30
—— = 12.00″ for 1 turn			2.4″	133.60	7.30
30					

Av. = 7.321° for .2″
5 × 7.321 for 1″ = 36.605°

$$\frac{360}{36.605} = 9.83'' \text{ for 1 turn}$$

FIGURE 5

been fully described in the above named *Journal*, Vol. 44, p. 799, 1954. Measurements of the widths of the grooves produced on the lead disk which has passed through the rifled barrel represent the width of the lands that made these grooves. All of the grooves are measured and the average is taken. The same instrument is used for measuring the widths of grooves on fired bullets. A binocular microscope (giving three dimensional vision) is absolutely essential in order to make accurate settings.

Special (modified) Starrett gauges have been devised for making accurate measurements of the bore and groove diameter of the rifled barrel (Fig. 3). For barrels having an odd number of grooves the bore diameter is determined by the conventional accurately ground tapered gauges and Starrett micrometer.

Photographs are made of each make and model of gun, both sides being photographed, together with a rule so that dimensions can be read off directly. A special system of lighting is used, and is illustrated in the accompanying photograph (Fig. 4). Two horizontally placed fluorescent tubes (mounted in reflector boxes) throw light upward to a curved (semi-circular) reflector having a glass bead surface. A hole at the top allows the light reflected from the gun to pass through to the lens of an Eastman view camera. A "light box" is used for supporting the gun and furnishing uniform white background illumination. In the box are six fluorescent tubes, below an opal glass. Above the opal glass (ca. 3 inches) is a plate glass upon which the gun is placed. This arrangement provides for uniform illumination and elimination of glare, as no light passes directly from the sources to the gun. It is particularly useful in photographing guns having highly reflecting surfaces. Samples of gun photographs are shown herewith (Fig. 6).

To date over 1,000 guns have been photographed and the rifling in over 2,000 guns from twenty-three countries has been measured, and hundreds of Trade Marks and other identifying marks have been photographed. Much appreciated cooperation has been received from several Police Departments, the Ordnance Department, several crime laboratories, Municipal and State Museums, other investigators and a few very cooperative gun collectors. Of course, some collectors have not cooperated. Some have feared loss of guns, some do not appreciate the importance of the work, some cannot cooperate because of legal restrictions, and some think it too much trouble. Of course not a single gun has been lost, all express and insurance charges (both ways) have been paid at this end, photographs and data have been furnished the owners (when desired) and the guns are always returned in at least as good (and often better) condition as when received. The problems remaining are to measure and photograph more guns—particularly the more uncommon ones, and finally to publish the results so that they may be available to all who can use them.* There are still a great many guns (particularly automatics) that are known to exist but specimens of which have not appeared. If any of the readers of POLICE have any hand guns which they consider to be uncommon I would very much like to hear from them. The purpose of all of this research, entailing several years of effort, is to furnish information which may be useful in law enforcement. Help is needed!

* In the meantime data on rifling characteristics will be furnished to any law enforcement agency requesting them for any firearm for which the data are known.

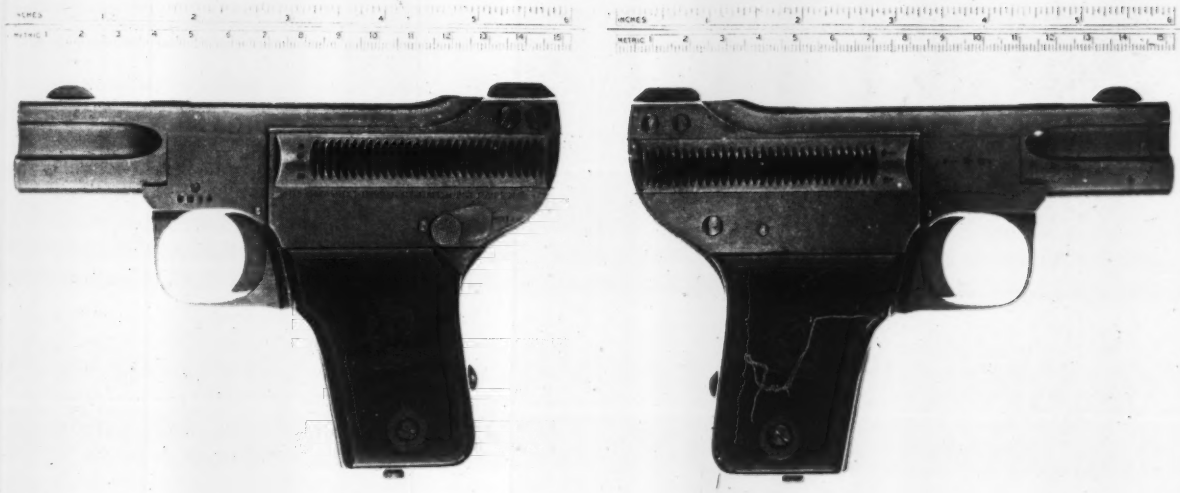


FIGURE 6. TYPICAL GUN PHOTOGRAPHS. *Each side of the gun is photographed. Separate photos are made of any Trade Marks or special identifying marks that may appear on the gun.*

EDITOR'S NOTE: *Listed below are a few makes of guns which are needed for measurement. It is requested that anyone possessing any of these types of guns communicate with Professor Mathews before forwarding them. At the time of forwarding, they should be sent to him by express collect.*

AUTOMATICS NEEDED FOR MEASUREMENT

Acier Comprime, Alfa, Allies, Apache, Arminius, Atlas, Avion, Azul.

Basculant, Bayard, Beholla, Beredo, Bernedo, Bergmann, Bergmann Erben, Bernardelli (.22 & 9 mm.), Bijou, Bolumburo, Borchardt, Bristo, Bristol, Brixia (9 mm.), Broncho (not Bronco), B.S.W.

Campeon, Campo-Giro, Cantabria, Caucelegui, Cebra, Cesar, Chanticler, Charola-Anitua, Chylewski, Ciervo, Clement, Continental, Corrientes, Criolla, Crucelegui, Crucero.

Danton, Defender, Delu, Demon, DeLuxe (Bolumburo), Demontant (Pieper), Destroyer, Destructor, Dictator, Douglass, Duan.

E. B. A. C., E.A. (Echave & Arizmendi), Elcid, Eles, Eley, Erika, Errasti, Especial (Arrizabalaga), Etna, Express.

Fiel, Femaru-Fegyvergyar (9 mm.), Fortuna, Francotte, Frommer (6.35 mm.), Gallus, Galesi (9 mm.), Gavage, Gecado, Gloria, Gueure, Guisasola.

Heim, Helfricht (Mod. 1, 2, 3), Helkra, HE-MO, Herman, HI Standard (Mod. A), Hudson.

Ideal, Imperial, Invicta.

Jaga, Joha, JO-LO-AR, Jubala.

Kaba (German), Kappora, Kebler, Keszler, Kimball, Kirikkale (9 mm.), Kolibri, Kommer (Mod. 1), Konrad-Komar.

La Industrial, La Lira, Langenhan (Mod. 1, 3), Le Dragon, Legia Demontants, Le Francais (9 mm.), Le Page, Le Rapide, Le Sans Pareil, Le Secours, Liberty, Libia, Liliput (Frommer), Little Tom, Loewe.

Mann (7.65 & 9 mm.), Marina, Mars, Marte, Martigny, Mayor, Menta, Menz (PB Spl. & M II), Merke, Merkel Olympic, Mikros, Minerve, Minima, Mondial, Monobloc, M. S. (Modesto Santos), Mueller Special.

Nordheim.

Okzet, Omega, Orbea, Ortgies (9 mm.), Oyez.

Pathfinder, Phillips, Pieper, Pinkerton, Plus Ultra, Precision, Premier, Princeps, Protector.

Regent, "Reims" Pat., Republic, Retolaza, Roland, Royal.

S. A. C. M. (Mod. S), Salaveria, Sauer (.22 Jaeger Pistole), Schmeisser (Mod. I & II), Schonberger, Schwarzlose (7.63 mm). Selecta, Simplex, Simson, Singer, Slavia, Sprinter, Star, Stenda, Stosel, T.A.C., Tanque, Tarn, Terrible, Thunder, Tigre, Titan, Tiwa, Triomphe, Triplex, Trust.

U. A. E., U. A. Z. (.22 L.R.), Union (French), Union (Spanish), Unis, Vainquer, Vencedor, Venus, Victor, Victoria, Victory, Vilars, Vincitor, Vite, Vobel.

Waldman, Webley.

Ydeal.

Zonda, Zulaika, Zwlaycka.

NOTE: It is doubtful that guns bearing some of the names listed ever existed although they have been reported. ★★★

TOWARD PROFESSIONAL LAW ENFORCEMENT

The primary role of the police profession in a democratic society is to maintain the delicate balance between the liberty of the individual on the one hand, and the demands of society for protection against crime, on the other. To be successful in this role, the policeman must be objective in the performance of his duties. He must be mindful of the civil rights of all the people and can show neither fear nor favor in the discharge of his duties.

But there is more that he can do. By taking the initiative in relieving the stresses and strains in the complex area of human relations, the police profession can render an invaluable service to the community. The harmony which exists among the diverse groups within its own ranks illustrates the advanced approach of police to the subject of human relations.

In approaching the problem of crime, the policeman often has to be a sociologist, a psychologist or a big brother as well as a law enforcement officer. The success or failure of the policeman in performing these functions in a democratic society is not only a barometer of our civilization but also a measure of his progress toward professional status.

Law enforcement is a young profession. Its youth and vitality proclaim its progressiveness. It must welcome the challenge of the times and be prepared to accept changes as it becomes aware of new concepts and new attitudes.

From New York City Police Annual Report.

The Police and Delinquency Control

By Frederic F. Schneidewind

EDITOR'S NOTE: *The U. S. Department of Health, Education and Welfare, through the Children's Bureau's Division of Juvenile Delinquency Service provides police consultation services to State and local agencies concerned with police work in the field of juvenile control and delinquency prevention. Such services consist of consultation in the establishment, the organization, and administration of specialized juvenile units in law enforcement agencies, and in assistance to the on-going programs of police and sheriffs' departments. Technical assistance is given on such procedural items as staffing, training, juvenile records system, community relationships with other youth serving agencies, and other problems relating to police work with youth. This service is available for both professional and lay groups having a genuine interest in police services for juveniles.*

Mr. Schneidewind came to work for the Children's Bureau as their first Police Services Consultant. Previous to the Children's Bureau appointment, he served with the California Youth Authority for four years as Consultant on Juvenile Control. In that capacity, he had the responsibility for providing consultation to local law enforcement agencies relating to the organization and operation of juvenile bureaus. Prior to the experience with the Youth Authority, he spent approximately nine years as a law enforcement officer in the Police Department of Berkeley, California, and in the San Francisco, California, Sheriff's Department. He received an A.B. degree in criminology from the University of California and, in addition, two years graduate training in criminology and social welfare at the same university.

"SPECIAL consideration of juvenile problems, including careful safeguarding of the rights of individual children and their parents, is an important function of all law-enforcement agencies and . . . this function can and must be carried out without in any way diminishing the traditional services of the police."

This basic premise was accepted by the National Conference on Juvenile Delinquency, called by the Secretary of the Department of Health, Education and Welfare in June, 1954.

It led to a request by the Conference that the U. S. Children's Bureau "add to its staff a consultant on police services to juveniles and to assist law enforcement departments thereby in discharging their rightful responsibility."

This Conference may well be a milestone in police history. As one of its results, for the first time since it was established in 1912, the Children's Bureau now offers consultative services to the police in their work with children. In this way the Federal government not only has recognized the important role that the police have to fill in working with children, but has added to the prestige of the job which police can and should do.

The author came to the Bureau some eighteen months ago from a background which included several years service as a law enforcement officer, as well as a consultant on juvenile control with the California Youth Authority. Experience has provided a working knowledge of police operations, as well as a very genuine sympathy for the tough job which police undertake.

In visits since that time to some twenty States, and discussions not only with law enforcement agencies but also with juvenile court and probation personnel, welfare and youth commission agencies and national organizations, I found two very general sentiments among police officers working with juveniles:

1. There is a great thirst, among these men and women, for more training so that they can do their jobs better.

2. There is a tremendous, almost insatiable interest in each department I visited, in what police in other parts of the country are doing in the field of delinquency control and prevention.

Against this background of interest, I would like to point up what I consider some of the general problems which police face in trying to do a good job with juveniles from a law enforcement standpoint:

1. A great deal of confusion exists because of the lack of uniform terminology among police departments.

An example of this is the word *arrest*. The Children's Bureau does not use this word in talking about children. It prefers the term *taken into custody*. But the word *arrest* is widely used, and has many meanings.

One police department considers a juvenile as arrested only if he is taken into custody and a petition filed in juvenile court. That same department can take a child into custody, keep him overnight in secure detention. On investigation, the department may decide that the child's interests will not be served by having a petition filed in court. The child, under this department's interpretation, has not been arrested.

Another police department within the same State considers a child arrested if he is stopped and interrogated for a law violation, even though he is not taken to a police station, and no charges are placed against him.

It readily can be seen that this wide variation in the use of the word *arrest* (and all the shades of meaning which exist between these ex-

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Illustrations supplied through the courtesy of the U. S. Children's Bureau.

tremes) has social as well as legal implications for a child who may or may not be arrested depending on the police jurisdiction. It also creates problems for the police in interpreting their performance, in gauging delinquency rates between one area and another, and in planning effective control measures. An additional complicating factor is the great difference in State and local laws on such matters as age of juveniles, what constitutes delinquency, etc.

Uniform terminology should be developed, common to all police departments, which could be used as a basis for accurate statistical reporting of police contacts with juveniles, and which would supplement figures now available.

It would be useful not only to police departments, but also to social, educational and health agencies within communities which also are concerned, in their various capacities, with the prevention and control of delinquency.

2. There are vast differences in philosophy among police departments on the value of specialization in work with juveniles. There are many departments which are giving enthusiastic support to the development of juvenile officers and juvenile divisions. But there are also contrary viewpoints.

Some departments feel that juveniles should be handled just as adults are handled, without any consideration for the child's immaturity. Some departments take the point of view that a juvenile division doesn't accomplish anything. Some departments that do have specialization fail to give it status in the organizational structure. They place the juvenile specialist in another division, often in the detective division, which is more properly concerned with arrests and prosecution than with the use of community agencies to help the offender.

3. There is still confusion among police officers concerning the functions which juvenile officers should undertake, and the principles they should use as guidelines. In some jurisdictions, police officers are doing probation work and feel this is their proper sphere of operation.

FIGURE 1. *Inspector John E. Winters of the Youth Aid Division, Metropolitan Washington Police Department, explains spot map concerning residence of juvenile offenders and location of offenses to the author.*

In some large departments, there has been a breakdown in communications between the patrol division and the juvenile division. As a result, the officer on patrol feels he is operating in the dark, and may even feel unqualified to talk to a child. The philosophy, approach and function of the juvenile division should be known to the entire department.

In the Children's Bureau we believe that this confusion in terms and practices indicates a need for more uniform standards for police work with juveniles.

Toward this end, we are now beginning to prepare some suggested standards which hopefully at some future date can be used as guidelines. In the process, we plan to consult with police officials and other interested groups. The standards would be something considered desirable against which a department could measure its practices. It is our hope that the guides will help to clarify the role of the police in delinquency prevention and control to the other agencies in the community which deal with children.

One of the knotty problems on which we hope to develop sound policy is the appropriate use of fingerprints in police work with juveniles. Some meeting ground must be found between the following diverse points of view:

(A) Police should routinely fingerprint and file in criminal files as a protection for the community.

(B) Fingerprinting should be a selective process and prints, when taken should be adequately protected in a non-criminal file.

(C) Fingerprints of juveniles should not be taken under any circumstances.

These are some of the conflicting viewpoints and practices which we see police struggling with over the country today. But there are also some very encouraging developments in the field of delinquency prevention and control in the police field.

One of these is the growing number of institutes for the training of police officers which are being held each year. I think it is significant that the sponsorship of these institutes is not limited to the police. Schools of law, schools of social work, attorneys general, youth commissions, are among the non-police

FIGURE 2. *Two recent graduates of the Delinquency Control Institute, Inspector John Winters and Sergeant William Rasmussen of the Metropolitan Police Department, Washington, D. C., discuss the case study approach.*

agencies which have sponsored many of these institutes.

Thus, recognition of the crucial role that police have to play in the field of delinquency prevention and control is increasing. Some police, who have felt they were alone in the crusade for more and better training to do their difficult job are getting new stimulation from the realization that they have allies in these other professions.

In the institutes I have attended, I have been most impressed by the way police seize the opportunity to sit down and talk through some of their relationships with other agencies. Misunderstandings between the police and the court—the probation officer, the judge—which have produced hostility in the past seem to clear up when there can be a frank discussion of questions of mutual concern.

The institutes give the police a chance to get a new perspective on their role. Their attendance bespeaks the confidence of their chiefs, and it is certainly an indication that they themselves want to grow on the job.

Another outgrowth of the institutes, in my opinion, is that they make the general public more aware that police departments are vitally concerned about their children—a most important accomplishment from the standpoint of good public relations.

It seems to be a general pattern that one institute leads to another, as fellow officers learn about institute programs. The institutes also seem to lead quite naturally to the formation of juvenile officer groups. In Texas, for instance, juvenile police officers attending The Institute on Children and Youth appointed a committee to organize a Texas juvenile officers association, with these goals: Better services for children and youth, more uniform practices and procedures, increased professional status of law enforcement officers. In the midwest, juvenile officers in a number of States have banded together to form The Central States Juvenile Officers Association.

Through standards it is drafting, through consultation it provides in establishing, organizing and administering juvenile units in law enforcement agencies, the Children's Bureau eagerly encourages the trend toward specialization of police work with juveniles. While the principal focus of our efforts is with officers assigned to work with juveniles, we feel that all police officers desire more complete orientation and understanding in this field.

We believe that a good juvenile officer must be a good police officer, with experience in general police work. He must be a keen observer, willing to exercise initiative, and be courteous and tactful. He must be able to temper firmness with tolerance, and idealism with common sense. Some training at the collegiate level in subjects such as the social sciences is desirable for such an officer.

We also believe that if society has a right to demand high qualifications for police, society must assure adequate and reasonable working conditions, adequate salaries, and retirement systems as well as job tenure.

What society has a "right" to expect from the police varies widely in interpretation. It could be successfully argued that society has a "right" to expect that police shall not expose juvenile delinquents to adult criminals by keeping them in the same jail. But if the police have a child in custody and must detain him, in most jurisdictions they have no alternative but to detain him in a jail—designed to house adults. And yet, many jails fail to pass the Federal Bureau of Prison standards for custodial facilities for adults. How much less will they meet the needs of children who are in trouble!

The public needs to know the limitations imposed both by lack of

facilities and by law, under which police departments operate. And it is a part of the police job to interpret their function to the communities they serve. Juvenile police officers, particularly because of the relative newness of this speciality, need to interpret their job and their function to the community. They need to develop close working relationships with other community agencies that can offer help to children.

In New Orleans, La., for instance, the captain of the juvenile division has a weekly radio program, on which he is interviewed by a panel of boys and girls, selected from different schools. By their questions and his answers, the public gets a realistic view of his job and his responsibilities.

In Richmond, Calif., police avoid a lot of needless friction with the public educators by sitting down informally, to iron out difficulties in administering truancy regulations; defining the police job, the school job, and seeing how they could inter-relate.

This article has dealt at some length with the role of the police in the prevention and control of delinquency. The Bureau's police consultant functions in the Technical Aid Branch in the Division of Juvenile Delinquency Service. Consultation with police departments, or other agencies interested in juvenile delinquency control through law enforcement, is but one facet of the program of the Division, which is the newest arm of the Bureau.

The Branch also is working with juvenile courts and their probation departments to try to improve the standards of service that probation departments can give children in trouble. It wants to help probation officers understand the function of police officers, particularly as that function relates to taking children into custody.

The Branch also is working with the administrative heads of training schools, so that the quality of their programs can be raised; so that these men and women can take advantage of the greatest advances and best thinking in this field of correctional work with juvenile delinquents.

FIGURE 3. *The screening and referral unit of the Youth Aid Division, Metropolitan Police Department, Washington, D.C.*

The Training Branch of the Division, in addition to institutes for training police officers, is promoting the establishments of institutes and workshops for training probation officers, and such people as house parents and cottage parents in training schools and other institutions which care for delinquent children. The goal in all these training programs is to reach a level where every one who deals with a child in trouble is a person trained for his specific job.

Through the Community Services Branch of the Division, the Bureau is trying to pull together in communities, all agencies who have a responsibility for working with children, so that they can work effectively toward a common objective: better, more responsive services. By this pulling together we hope to avoid both duplication and gaps in service, so that children do not "fall through the cracks" unnoticed when they need help.

To the extent that time and travel of a small staff personnel permit, these services are available on the request of interested public and voluntary agencies, either State or local. Since the Bureau has but one consultant in police services, considerable time must be given to working with Statewide groups or organizations and to institutes through which larger numbers can be reached and in which the role of the police department and in particular that of the juvenile police officers can be clarified.

Since becoming identified with the Bureau, the author has given consultation both in the field and through correspondence in such areas as techniques in working with juveniles, police-court relationships, establishment of juvenile divisions, establishment of police-juvenile reporting system, assistance in establishing juvenile officers associations.

★★★

Preventive Psychiatry in the Los Angeles Police Department

By James H. Rankin, M.D.

EDITOR'S NOTE: *Dr. Rankin's psychiatric experience began in the State Hospital system of Pennsylvania. Following an interlude with the Medical Corps in the E.T.O., World War II, he became associated with the Veterans Administration and subsequently found himself at the head of the Brentwood V.A. Psychiatric Hospital in Los Angeles. In the meantime, he had completed his psychoanalytic training and began teaching in the Medical School at the University of California in Los Angeles. His professional connections include the Los Angeles County Medical Association, Southern California Psychiatric Society, Los Angeles Psychiatric Services, Society for Psychoanalytic Medicine of Southern California, American Psychoanalytic Association, American Psychiatric Association, Clinical Professor of Psychiatry, School of Medicine, University of California at Los Angeles, Psychiatric Consultant for the Los Angeles Police Department, and Psychiatrist, Beverly Hills Medical Clinic.*

In the following article, Dr. Rankin points out in clearly understandable terms the contributions psychiatry can make in the police entrance examination process. In view of the increasing emphasis on higher standards and qualifications for entrance into police service, what he has to say will prove of unusual interest to police personnel.

IN the past few years there has been mounting concern about the quality of applicants for police work, especially in terms of their general personality structure and emotional stability. The receptivity of key law enforcement officers to the concept of psychiatric evaluation of applicants for police work has been gratifying. This is just as true in smaller communities in the State as in large cities like Los Angeles. This receptivity is seen in State and County law enforcement organizations as well as in police departments.

INCEPTION OF MOVEMENT

The movement to utilize psychiatric techniques as an aid in selection of police applicants had its inception at Berkeley, California, somewhat over three years ago. There, Dr. Douglas Kelley, Professor of Criminology at the University of California, began screening applicants for the police department in the City of Berkeley. Shortly thereafter, the City of Los Angeles officially authorized Dr. Charles Sebastian, Superintendent of Receiving Hospitals, to include psychiatric examination as a part of the physical examination given to all applicants for the Los Angeles Police.

There were a number of factors which led to this progressive step, among which was an explosive incident involving brutal and overly aggressive acts on the part of several policemen toward prisoners in their custody. This event did much to bring the need for psychiatric screening into focus and the newspapers' editorial coverage did much to gain public support of a psychiatric program. However, long before that incident, the Police Department had been concerned with the problem of improving personnel selection. Within the police department the psychiatric program was welcomed enthusiastically. Initial screening of cadets in the Police Academy was started on June 1, 1953. Since that time no applicant has graduated from the Academy without having psychiatric evaluation.

At the beginning of the program it was recognized that some method of mass production would be necessary to accomplish the task of evaluating all these applicants. Originally we thought that between fifty and one hundred applicants would be examined. In the subsequent three years, some seven hundred and sixty police department applicants have been examined. Obviously, to do any sort of accurate and reliable examination on this number of persons would be a full-time job under the usual examinational procedure. It was also obvious that an indirect approach would be necessary. Applicants understandably would feel threatened by my examination and would certainly not volitionally contribute any data that might be detrimental. Although during these three years minor technical changes have been made, our basic examination technique remains unchanged.

Final determination of the psychiatric acceptability of applicants is based upon two factors: my impression after the clinical interview, and by the results of psychologic testing.

INVESTIGATION OF APPLICANT'S BACKGROUND

We are fortunate to have extensive background investigations available to us. These are made by the personnel section of the police department. They do an amazingly exhaustive investigation of the applicant's background for honesty, arrest records, educational attainment, work habits, personal traits, environmental stresses, and frank opinion of people who know the applicant well as to the applicant's general suitability to become a police officer. Military service records are also scanned carefully for such things as court martials or other deviational incidents. If the applicant does not meet the high standards demanded in the background investigation, almost invariably he will be dropped from consideration for the police force. Obviously, this rigid background investigation is a great help to the psychiatrist, because it automatically eliminates many socially maladjusted per-

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sons before they are interviewed by me. However, there are many instances when it is necessary that I interview these people before the background investigation has been completely developed; therefore, I cannot always assume that applicants have been given the fine-tooth comb of investigational procedures. In practice there has evolved a cross utilization of personnel and psyciatric opinion. I do not hesitate to use the personnel department's background data in my over-all evaluation for accepting or failing an applicant. Having such a detailed background available is a considerable timesaver and gives an increased sense of security in making my final opinion.

PSYCHOLOGICAL TESTS USED

As was mentioned before, it is assumed that these applicants want to "put their best foot forward." For this reason it was assumed that psychologic tests were necessary to ascertain the applicants' underlying personality structures and emotional attitudes. One essential criterion in the selection of tests was their adaptability to group testing as well as on an individual basis. Two tests met this requirement: the Minnesota Multiphasic Personality Inventory and the Group Rorschach. It is possible to administer the MMPI to groups and score the answer sheet mechanically very quickly. Interpretation of the profile also can be done rapidly when one is familiar with the test. The Group Rorschach, on the other hand, poses a somewhat different problem. There have been many conflicting opinions about the validity of Group Rorschach and a number of different techniques for its use. We have compromised on this test. It is administered on a group basis by means of lantern slides, each applicant using the Group Rorschach answer booklet; however the answer booklets are scored individually. Each applicant's answer booklet is treated as if it had been administered individually. Some short cut techniques, using Back's scoring system, have been worked out. On a number of occasions, applicants have been asked to come to the office for individual Rorschachs which have given us the opportunity of validating group scoring against individual scoring. Our experiences with this test variant will be presented in another paper. As time has gone by and the total number of Group Rorschachs has mounted, we have had a corresponding increase in confidence in this test technique as well as in the MMPI.

Even with the recognized importance of psychologic testing, it is still of utmost importance that the applicant be interviewed on an individual basis. These interviews are of necessity brief, lasting from fifteen to twenty minutes for each applicant; however, it is surprising how much data, information and impressions can be gained in this short space of time by using a sort of production line type of questioning. I use a mimeographed form sheet which allows rapid brief recording of data; inquiry is made about the parents, their personality, religion, father's occupation, marital difficulties, etc. It is rather surprising how much one can infer about an applicant

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by requesting that he give a personality description of each of his parents. I am also interested in the applicant's school work, his religious attitudes, marriage problems, work record, military experience, etc. Briefly noted is my impression; his demeanor, appearance, ability to relate himself to the interviewer, his emotional endowment, his ability to be articulate, and mood potentialities. I try to evaluate whether he seems to be a latently or overtly hostile person, a passive, weak type of personality, or apparently stable person. In general, this subjective formulation or impression of the applicant is based upon clinical experience and especially on the clinical experience of having interviewed over seven hundred such applicants. Almost without my knowing it, each applicant is compared against a subjective norm which has been established during these three years.

ONLY A SMALL PERCENTAGE ARE "FIT"

Some idea of the magnitude of the task of selecting cadets for the police force may be had by giving some statistics on applicants who filed for examination during the calendar year of 1955. There were four thousand two hundred thirty-nine persons who filed for the examination. Of this group, one thousand nine hundred eighty-nine passed the written Civil Service examination, approximately forty-seven per cent. Of this group, one thousand two hundred ninety-two passed the Physical Agility test. Of this remaining group, only six hundred twenty-nine passed the oral examination, less than fifteen per cent of those that originally filed. By the time the medical examinations were finished, there were only one hundred eighty-eight persons still surviving. Of these, one hundred sixty-one took the Psychologic Evaluation. Of this small group, twenty-five failed, 15.6 per cent. One hundred nineteen men went into the Police Academy for thirteen weeks of basic training. Of this group, only one hundred and three graduated. One hundred and three men put on uniforms and went to work "in the field" out of four thousand two hundred thirty-nine that filed for the examination, a percentage of 2.4.

SIGNIFICANCE OF SCREENING

As an introduction to the significance of the psychiatric screening program, an examination of the reasons for failure of sixteen cadets in the 1955 group in the Academy is illuminating. Ten were terminated because of unsatisfactory background history. A new method of conducting Civil Service examinations will insure complete background investigation prior to the applicant entering the Academy, thus preventing this type of Academy rejection. Three cadets resigned. Only three were found to be unsatisfactory by Academy standards. The percentage of failures for this reason was small, five per cent. Had the twenty-five persons who were rejected by the psychiatric examination been added to the Academy group, I am sure that the percentage of failures at the Academy would have been significantly greater. In terms of dollars and cents, not to mention faculty time spent

on unfit applicants, the results of preventive psychiatric screening can be measured in thousands of dollars.

Since June 1, 1953, there have been seven hundred sixty persons tested. Of this group, eighty-six, or 11.3 per cent, were rejected as not meeting acceptable psychiatric standards. All unacceptable applicants have been diagnosed under the general grouping of Personality Disorders. Although this appears unusual, an explanation can be offered. The time element from initial filing to completing the gauntlet of examinations is frequently long. The normal frustrations of Civil Service procedures are present. Written and oral examinations, physical agility tests and still medical standards all combine to discourage the overt neurotic or psychotic. On the other hand, the individual with a personality disorder or latent psychosis often finds incentive to persist through the stress of examination, attracted by security, prestige through wearing a uniform, and an opportunity to exert authority, thereby allaying to some degree inner doubts, confusion and anxieties.

Although no diagnosis of psychosis was made, a significantly large group, 51 per cent, were found to be latently or borderline psychotic. These individuals are aptly described in the *A.P.A. Statistical Manual* under Personality Pattern Disturbance. I quote: "The depth of the psychopathology here allows these individuals little room to maneuver under conditions of stress except into actual psychosis."

Fifteen per cent of this group were classed as Inadequate Personalities; clinical judgment and testing pointed to their being generally inept, inadaptable, lacking in judgment and emotional stamina.

Twenty-two per cent were diagnosed as Schizoid Personalities. There is no need to elaborate on what is meant by this diagnosis.

Fourteen per cent were diagnosed as having either Cyclothymic or Paranoid personalities.

Thus over half of the rejected applicants, forty-four individuals, were considered borderline psychotics. It is all too easy to visualize the potential trouble such individuals could cause when given the authority of uniform and badge. Once an individual is under Civil Service, it is far from easy to eliminate him from his job. Evidence must be clear and abundant before separation from the department is possible. The time and money spent in separation procedures is considerable, not to mention the cost to the taxpayer in terms of many years of retirement pay.

Thirty-nine per cent of non-acceptable applicants were grouped under the heading of Personality Trait Disturbance. As you recall, the *A.P.A. Statistical Manual* describes this group as persons who are unable to maintain emotional equilibrium and emotional independence under stress because of disturbance in their emotional development. This group includes both those who have personality fixations and distortions and those whose behavior is due to regression under stress. Two-thirds of the personality trait disturbances were the Emotionally Unstable Personalities. Their judgment under stress is undependable. Their relationship with other people fluctuates widely because of poor control over their emotions. Anxiety, guilt and hostility are manifest. The balance of the Trait Disturbances included the Aggressive Personalities and those excessively rigid, brittle, compulsive personalities who cannot meet new and changing situations.

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Only ten per cent of failures were classed as Sociopathic Personality Disturbances. These persons are always in trouble, do not profit from experience and punishment. Diagnoses of this nature were reserved for those individuals whose background investigations confirmed our suspicions that the individual leaned toward antisocial behavior. Sexual deviation, five persons, was diagnosed only when admitted on confrontation or when they had been convicted by court action. Most persons who would fit into this category are eliminated by background investigation prior to my examination. Ten out of the sixteen Academy rejections of the 1955 group might be tentatively classed in the category of Sociopathic personality. It is very difficult by testing and brief interview to gather sufficient evidence for such a diagnosis. We rely, therefore, on background investigation to confirm the diagnosis of this type of personality disorder.

Latent neuroses are encountered rather often. While they may be suspected in the clinical interview, there is usually little overt evidence so that neurotic stresses are picked up ordinarily by the Rorschach and Minne-

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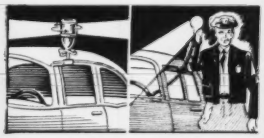

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sota; for example, on the Minnesota, the validation part of the profile, the L, F, and K scores often are elevated, especially L and K, which points to anxiety and the urge to put themselves in the best light regardless of stretching the truth. By the same token, the Rorschach easily picks up anxieties, depressions, and tendencies toward conversion into somatic channels, etc. These are the individuals with whom one must use his best clinical judgment to estimate how much stress they can take; whether compensatory mechanisms are adequate; and whether the degree of personality integration is sufficient to take the expected stresses of police work. Frequently in this group we do a bit of "fence straddling." In other words, we will not reject these individuals outright, but will allow them to go into the Academy with warning comments. Traits that should be watched for in the Academy and during the probation period are enumerated, and we may even suggest that the Academy apply certain types of stress during the training period to see if latent weaknesses might be brought out. The rigors of thirteen weeks training at the Academy is very often sufficient to light up a latent emotional conflict to the point that the individual either resigns voluntarily or is eliminated by the faculty staff at the Academy. Thus, instead of arbitrarily saying that a latent neurotic is not satisfactory, we give them a test of functioning under real stress conditions. For instance, if we feel that an individual has wide mood swings from elation to depression, or is impulsive or accident prone, or has a "chip on his shoulder attitude," we call these things to the attention of the proper individuals through medical channels so that the cadet may be watched very carefully during his period of training and probation. Implicit in this procedure is our admission that with latent neurotics, clinical judgment and psychologic testing should be supplemented by the yardstick of actual job experience before making a final evaluation.

MULTIPLE PURPOSE OF SCREENING

Although our primary and most important mission is the elimination of the mentally and emotionally unfit during the selection process, there is another aspect to psychiatric screening that may ultimately prove to be equally important: research opportunities. The need for rapid, reliable testing of relatively large groups of persons will increase in law enforcement areas as well as in other fields of activity. We feel that a contribution to the use of Group Rorschach can be made from our data which now consists of over eight hundred records. A careful study of accident proneness is possible from this same data by reviewing the applicant's original Rorschach and MMPI data with the policeman who subsequently proves to be accident prone. Unconscious attitudes towards authority can be assessed at the time the individual enters police work. Do these attitudes in quantity and quality have a determining effect on whether a policeman is good, bad or indifferent? Time and correlation of data will help answer it. A high percentage of applicants for police jobs are attracted by "security" advantages. Does this merely mean monetary security or emotional security through a strong group identification? This too can be approached through our Rorschach data and validated by comparison to the individual's work efficiency.

Obviously, there is no present answer to the question, "What factors contribute to the development of a good policeman?" Perhaps the future may contribute some clues to the answer. On the other hand, the question, "What makes a bad policeman?" seems answerable. The bad policeman comes from that large group of emotionally disturbed people known as Personality Disorders which includes the latent psychotic, the latent (or overt) social malcontent or rebel, and the partially fixated immature person who reacts poorly to stress.

I should like to give you some idea of how extensive the spread has been of psychiatric examination of police applicants. Three years ago Los Angeles was the first major city to institute it. Since that time letters of inquiry have indicated its use in Washington, D. C., Chicago, Philadelphia, New Orleans, Phoenix and San Francisco. I'm sure there are others. In Southern California, an increasing number of cities are employing some sort of test requirements. A number of cities in Central California also require psychiatric screening.

Psychiatric examination of police recruits is an important and growing function of psychiatry. The potential value to public relations and education is of similar importance. Above all is the opportunity for

psychiatry to perform an immediately recognized public service. We must not let the opportunity to go by default. The challenge of this type of psychiatric pioneering will bring much satisfaction to those who elect to engage in it. ★★★

MOST HEROIC OFFICER HONORED

Patrolman William P. Sammon, chosen the nation's most heroic policeman, received the first annual H & R Golden Gun Award for heroism recently (May 23).

He was presented with an engraved, gold-plated revolver by Harrington & Richardson, Inc. of Worcester, Mass. in a ceremony at the Chicago Police range that was televised nationally on the NBC "Tonight!" show.

Sammon, 28 and the father of a 1½-year-old daughter, killed a bandit in a gun duel the first time he ever was called on to use his service revolver.

The heroic policeman was trapped by the safety belt in his patrol car following a wild chase of a market holdup getaway car. He was being stalked by a former convict armed with a sawed-off shotgun. In the ensuing gun duel, Sammon fired five perfect shots through the windshield, killing the criminal.

Chief George A. Otlewis of Chicago, President of the International Association of Chiefs of Police, called the incident "an excellent and outstanding performance of police duty," in making the presentation.

"He has the commendations of all the law enforcement agencies," Chief Otlewis said. "He showed tremendous courage in a precarious situation in which a mistake might have cost him his life, and allowed an armed criminal to go free."

Chief Otlewis also praised Harrington & Richardson for taking the lead in focusing attention on distinguished acts of heroism by law enforcement officers.

"The IACP is cognizant of the great contribution to morale and performance that results from honors such as the H & R Golden Gun Award," said Chief Otlewis. "The police of the U.S. might well be proud of their tradition of bravery and devotion to duty."

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Suggestions to Officers On Forgery Investigation

By Inspector Julius L. Sternitzky

EDITOR'S NOTE: *Inspector Sternitzky is one of those rare individuals who is taking time out to make his long and rich experience available through lectures, articles and books to the present generation of police officers. We need more people like Inspector Sternitzky. He was appointed as Patrolman in the Oakland Police Department on March 10, 1916 and advanced successively through the ranks of Corporal of Police, Sergeant of Police to Assistant Inspector of Police and finally to the rank of Inspector of Police on August 8, 1923. He held this position until his retirement on May 1, 1949.*

Under the direction of the California State Board of Education, Inspector Sternitzky has lectured on worthless check investigation for over ten years in training programs for the Police, Sheriff's Deputies and Investigators for District Attorneys. His services as a lecturer on forgery and other questioned document problems have also included assignments at the University of California, San Jose State College and Fresno State College.

His book, FORGERY AND FICTITIOUS CHECKS, *has been the subject of favorable reviews from all parts of the world.*

IT is quite generally believed by professors of law and experienced law enforcement officials that a competent legislator or officer is one who has had at least ten years of experience in law enforcement. However, many who have had even twenty or more years of experience are not always the best qualified. Observation, interviews, personal contact, and study of records have shown this to be true. The successful peace officer is the one who is continually studying. Through observation, together with the advice of his superiors or other qualified and experienced officials, he seeks to improve himself. A legislator to be successful should have the necessary ability and experience to enable him to introduce a new law, or an amendment to a present law, which does not abolish, conflict with, or weaken a present good law.

Pertinent criticism of contemplated laws by experienced legislators and officers can be of timely benefit to the general public and to all who may be concerned with law enforcement. It can prevent hasty changes, due to lack of research before introduction of the bills.

THE BAUMES ACT (HABITUAL CRIMINAL ACT)

The Baumes Act is one of the best deterrents of crime ever enacted. Originally the act included forgers and fictitious check passers, who perhaps are the most habitual criminals.

In order for a person to be sentenced under the Baumes Act, there must be three previous convictions and sentence to a state prison. After the enactment of this Act, it was found that with the sentencing of forgers who had already served three or more sentences in state prisons, these institutions were rapidly becoming filled. The Act was then amended to apply to only major crimes in California, and the section relating to forgery and check passing was stricken out. As a result, today many who are arrested for forgery and check passing are more leniently sentenced if they have already served three or more sentences in a state prison. The Court sentence or Parole Board disposition of their case is not a sufficient deterrent to keep them from repeating the offense after their release, as the following example shows.

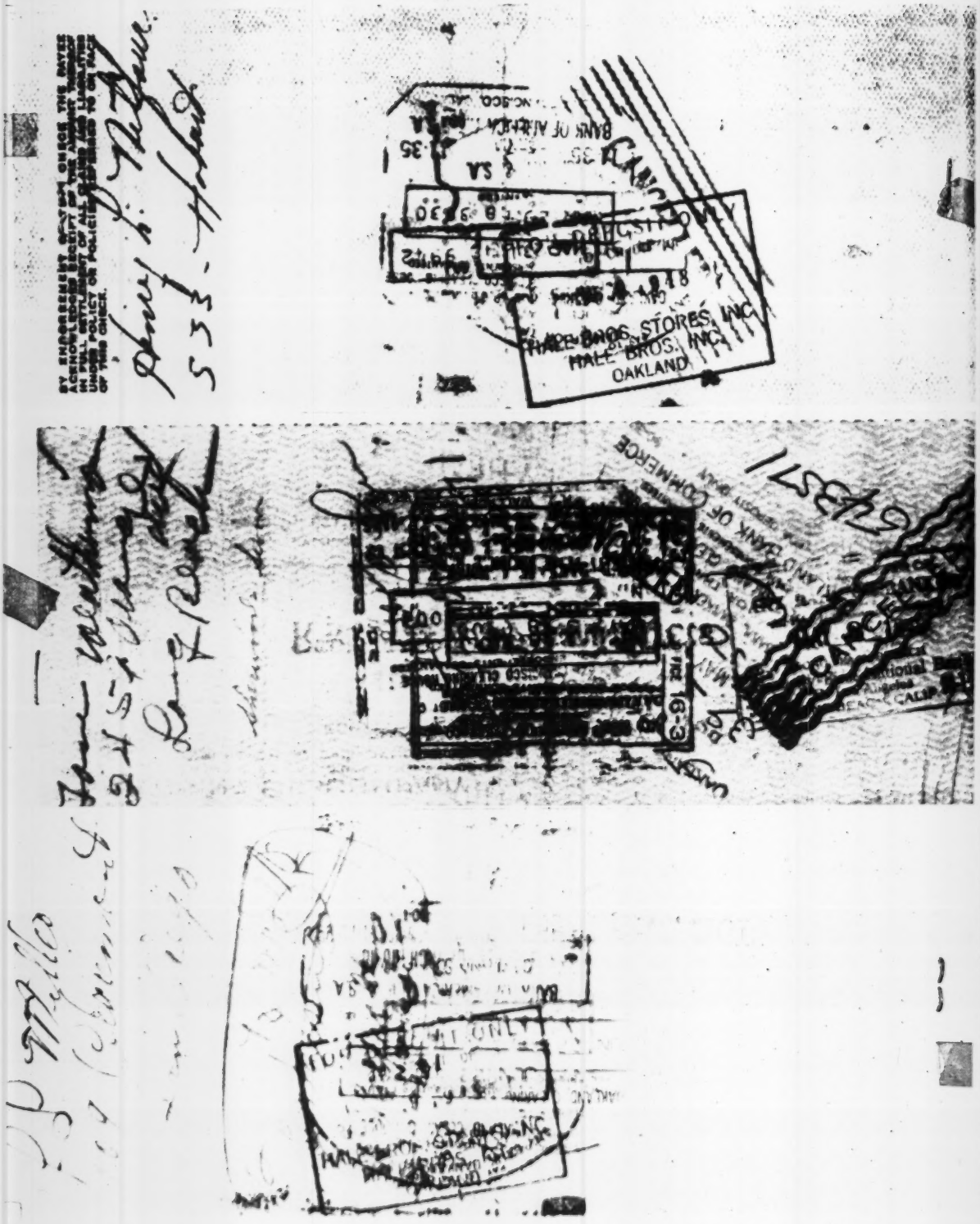
A month after the release of a number of forgers who had been sentenced under the Baumes Act, a check was reported which bore the forged name of a well-known Police Captain. The handwriting was that of a forger who had been sentenced from Alameda County (California), and the record indicated that he was still in state prison. Eventually, however, the record of his release was received after an inquiry had been made to ascertain if he was still in state prison. He was arrested and again sentenced for forgery.

It is evident that the amendment of the Baumes Act to exclude forgers is a factor in the repeated operations of these criminals after they are released. It is these individuals who continuously, with intent to defraud and injure the name of an innocent person, or persons, write their names to some document, check, will, draft, promissory note, codicil, bond, bank bill, receipt for money or property, stock, controller's warrant, and others mentioned in the Code, without the authority of the person, or persons whose names are signed, and obtain money or property, by passing or uttering the document.

Years ago the crime of forgery was a major offense, but today it is as common as petty larceny. Although the reason can be attributed to several causes, it is probable that the major one is the removal of the provision relating to the crime of forgery, from the Baumes Act.

Many forgers, working by themselves, with a confederate, or with a mob, steal books of checks, typewriters, protectographs, stamps, and other articles, from some office or building. This is usually done at nighttime in a burglary of the prem-

Address: Inspector J. L. Sternitzky, 5321 James Avenue, Oakland 9, California.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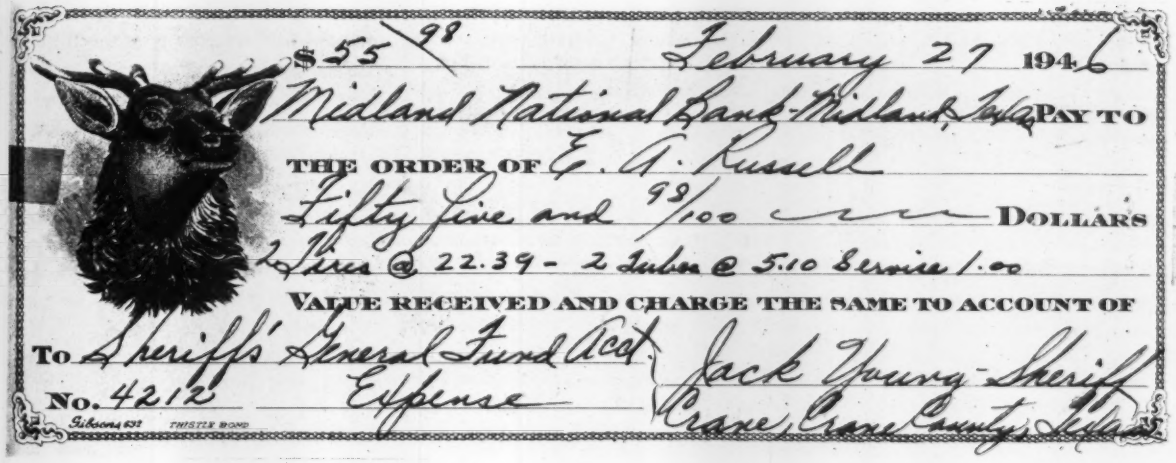
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ises, a type of crime which has become quite frequent. These people then use the typewriter and protectograph to sign the name of the owner, or a fictitious name, to the checks. They usually represent that they are pay checks, and make them payable to a fictitious person and address. Generally they operate the next day after the burglary and pass the checks in wholesale quantities. They are successful in many cases because the burglary and the serial numbers of the stolen checks are not immediately reported so that a warning could be given to the general public and business places.

Such forgers are the most vicious type. If the forger is an ex-con, he should be made to serve time for both offenses—burglary and forgery. The Judge who hears the forger's case should recommend that the criminal offender serve full time for each offense.

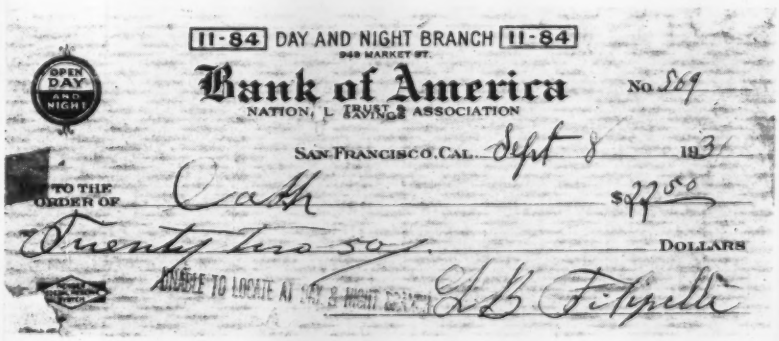
An amendment to another statute has had an effect upon the increase of forgery. The statute originally set forth that when a Notarial Protest accompanied a check which was protested by a bank, the Notarial Protest was sufficient evidence of or testimony to the validity of the check, and it was not necessary to subpoena a member of the bank in court cases. This was a big saving to the taxpayers, especially in cases where checks were drawn on banks out of the state. However, in 1955, Section 476a P.C. was amended twice, and the Notarial Protest was omitted from a section in one of the bills. As a result, it was found that there would have to be a new law enacted which would include the Notarial Protest. In order to eliminate the difficulty, the California Legislature at its first extra session in 1956 enacted Senate Bill No. 8, which incorporates the protest. All the confusion could have been avoided if representatives of the Bar Association, all law and legislative officers, judges, district attorneys, peace officers' associations, and legislative councils had been consulted or had been given an opportunity to review the law.

NARCOTIC CHECK PASSERS

In the writer's book, *Forgery and Fictitious Checks*, a description and copy of a check constructed, written, and passed by a narcotic addict show how cleverly this type of forger can operate (pages 30, 31). The check passer who is a narcotic addict is a special menace to society. Dealing with the narcotics situation has become a national problem. The Senate Subcommittee on Narcotics fearlessly and conscientiously went to work on the problem and rapidly molded the new law which provides for the necessary punishment of narcotic addicts and peddlers. It was unanimously voted by both Houses.

GENERAL KNOWLEDGE ALL OFFICERS SHOULD HAVE AND PRACTICE

In making reports concerning check violations, care should be used to state the actual occurrence, language used by the passer of the check, and evidence of the crime. If possible, have the victim describe the actual writing and endorsing of the check, also give a minute description of the passer of the check. If the person at the place of busi-



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ness reporting the check did not actually cash, or witness the cashing of the check, a second inquiry of the person who did cash the check is important. Too many errors are made by not getting the proper information, and many false descriptions are given. Sometimes officers after making preliminary investigations fail to note the investigation results on their reports. When there is a regular check detail in any police department in the city or county in which the offense occurred, it should be informed of the results of any previous investigation.

Chiefs of Police and Captains in charge of Detective Divisions should instruct all patrolmen, office clerks, or members of their department taking reports, to attach the check, or a photographed copy thereof, to the original report. Much time is wasted in an important investigation when officers fail to comply with this instruction. Many merchants and store owners think that they should report the check to their insurance company, or legal representative, and that the police can wait until these agents or representatives are through with their investigation. However, if the report is first made to the Police Department, it can always furnish a copy of the original check. When warning about check passing is given, the officer should inform the proper person, and insist that store owners or managers receive the warning. All places of business should be warned, not just a few saloons and some of the stores. This admonition is necessary because occasionally, complaints have been received from merchants who, after cashing forged checks, later learned that nearby stores had received a warning of such checks being passed, but the victims had not been informed.

Many times officers receive this statement, "I do not know which clerk cashed the check, and we cannot describe the person who cashed it." The check should be reported just the same, as many convictions have been obtained through the testimony of handwriting experts in court which showed that the check bore the endorsement of the owner of the establishment and was cashed there. The corpus delicti was thereby proven.

At times a forger has left a forged check in a store where he was asking to cash it because he was frightened from the scene when he saw the store owner or a clerk reach for the telephone, or heard an inquiry being made regarding the validity of the check. The report should be made just the same as if the check had been cashed. The offense of forgery was committed by the defendant when he stated the check was genuine. Convictions have been secured because the defendant uttered the forged check.

Many humorous instances have occurred as a result of telephone inquiries being made regarding the validity of a check. One tavern owner stated, "I would like to catch one of these fellows who give me forged checks," so he was instructed to call the owner of the establishment mentioned on the check, and ascertain if he had issued the check. A few days later he excitedly reported by telephone that a check was left behind by a forger when the tavern owner reached for the telephone. He stated that the man came in and ordered a drink and presented the check in payment. It was a personal size check but had a firm name stamped on it. After contacting the owner of the firm by telephone, he learned that the firm never issued checks of this type. Then the tavern owner reported, "I looked around and the man was gone, several blocks down the street by this time, so now I try that plan all the time."

Officers should never take handwriting exemplars from a suspect, except in a prescribed manner, and above all should never express their opinion unless they are experts. Too many forgers are given a defense at the trial by premature expressions of this kind. In a line-up of suspects, the witnesses should be requested not to talk, except to express their opinion regarding identification to the officer in charge. At his later trial a suspect will always use an uttered expression of a witness. Many defendants gloat over the inability of witnesses to identify them. One defendant who was charged with robbery and forgery, stated after a line-up, "There were a lot of people in that line-up who did not recognize me, but I knew everyone of them." In some cases where guilt has been proven, it is wise to request the defendant to identify witnesses. In a certain case, a woman who confessed to passing $5,000 in forged checks was confronted with seven clerks of a large department store where she had passed many of the checks. They all stood mute in her presence. However, when the woman was asked if she knew any of them, she identified a clerk who had sold her lin-

gerie, another who had sold her curtains, and a man who had sold her slippers; in fact, she identified all of them and their departments.

After operating for three years, passing hundreds of checks in Oakland, San Francisco, and other cities, this woman forger was arrested. She stated, "I am glad I was caught; I feel so relaxed now, for I was expecting to be caught any day. It was so easy to cash checks, for nobody asked me any questions. I got the idea after cashing my insurance check. I forged the names of women who had given me checks while I was employed in a department store; I memorized their names and their banks." The next day a small truck was sent to her home, where it was filled with the articles she had obtained, including love birds, lingerie, dresses, curtains, shoes, and many other things.

The banks upon which the checks were drawn had cashed many of the checks which she passed, and the forgeries were not discovered until the women depositors had received their monthly statements. The handwriting on her checks was always the same, so photographed copies of some of the checks were made and given to cashiers of stores with instructions concerning how to examine and define the writing. She was arrested through the alertness of a cashier who identified a check presented to her and notified the manager of the store. He was fearful of a false arrest and therefore instructed the cashier to release the woman and not to take any action. The cashier, however, was so incensed about the woman's act that she grabbed the forger around the neck as she was leaving the store and exclaimed, "I'll be darned if I let you go; you are the woman the Inspector warned me of, and it's your handwriting on all the forged checks passed in this store." When the purse of the woman was examined, three more checks were found which she stated she had written and intended to pass. ★★★

INTERESTING AND UNUSUAL CASES

A GHOST WALKED IN THE NIGHT

The "huge" footprint shown above was found by alert police investigators of Coronado, California, in a bedroom following the report of a criminal attack on a housewife. The original impression measured 13″ in length.

The print did not stand up and shout "Here I am" like it appears to be doing in the photograph. Intensification was accomplished photographically by reflected light. The photographer's skill speaks for itself.

The print brought about the solution of the case when a suspect was apprehended committing an attack under almost identical circumstances in an adjoining city. The suspect "knew nothing" about the assault and incident until his memory was refreshed with a one-to-one photograph of the impression which he compared with his foot. He recognized it very quickly and a confession followed.

Perhaps the most interesting and unusual facts about this particular impression are that the pattern was "impressed" into the floorwax of the well-tended maple floor. And the suspect apparently stood motionless in his tracks for some time prior to the attack.

The photograph was made by reflected light rather than oblique which is ordinarily the case when impressions are made in or with dust. An arch is practically absent in the impression. Also the print appears to have been made by a 4-toed foot. The second toe does not contact the floor. It rides above and between the great and third toes. Although this characteristic is not particularly uncommon, it was helpful in effecting an identification.

(Courtesy, Lieutenant Walter R. Scott, San Diego Police Department.)

POLYGRAPH
and INTERROGATION

To establish and maintain a standard of ethics and professional qualifications

Edited by ROBERT D. STEEL

Scientific Proof of Credibility*

By Paul V. Trovillo

EDITOR'S NOTE: *Paul V. Trovillo received his B.S. and M.S. degrees from the University of Kansas and has been active since 1934 in the field of scientific crime detection. From 1938 to 1942, he was employed as forensic psychologist at the Scientific Crime Laboratory, Chicago, Illinois, under the direction of Professors Leonarde Keeler and Fred Inbau of the Northwestern University School of Law. During the last part of W.W. II, Mr. Trovillo joined Keeler and his staff of experts who questioned and examined German prisoners of war. Later Mr. Trovillo was associated with Russell Chatham in the polygraph screening of employees for The Atomic Energy Commission and its contractors. Mr. Trovillo is co-author with Russell Chatham of the book,* THE TRUTH ABOUT THE LIE DETECTOR, *scheduled for publication in the Police Science Series. Following, is the first in a series of two articles by Mr. Trovillo under the title,* SCIENTIFIC PROOF OF CREDIBILITY.

SOME 200,000 persons in the United States have taken polygraph tests for deception in the last twenty years. Three hundred specialists have qualified, or are becoming qualified as experts in the giving and interpreting of polygraph tests. Literally, the murders of thousands of men, women and children whose violent and ignominious deaths remained mysterious, have been solved through the review of polygraph charts by experts.

Recently the state of Illinois had 45 such examiners; California, 32; New York, 26; Indiana, 16; District of Columbia, 14; Texas, 13; Ohio, 13; and Michigan, Georgia and Tennessee, 8 each. In addition to approximately 100 police departments using the test, there are 55 personnel consultants who employ them in connection with investigative and personnel examinations.

Indeed, 55 experts have gone into court with their polygrams and testified as to the indications in the charts before judges and juries in municipal, district, and superior courts. It is not a coincidence that several departments of the Federal Government, including the Atomic Energy Commission, and all branches of the Military Services avail themselves of these tests. The Army, the Navy, and the Air Force are engaging in research in the polygraph technique, in general deception studies and in the measurement of psychobiological stresses.

Is such acceptance justified? Is this a healthy trend? Is the polygraph a lie detector? Is it a sound, scientific technique for reflecting the credibility of witnesses?

The accused who walks into the quiet interrogation rooms of police departments to submit to polygraph tests is as likely to be innocent as guilty. A survey of prominent police departments made by the writer, for Russell Chatham, Inc., shows that, on the average, 45 per cent of tested suspects reveal indications of guilt, an equal percentage are apparently truthful, and the status of the 10 per cent remaining is in doubt. These polygraph recordings of bodily expression, some relating to human emotion, become a form of proof to the expert, who must "interpret" them for the uninitiated.[1] The interpreted evidence of the polygrams does not, however, immediately establish the fact to be proved; it

Address: Mr. Paul V. Trovillo, 702 63rd Street South, Gulfport, Florida.

* Reprinted through the courtesy of the *Tennessee Law Review*.

[1] See Streeter, Jack and Belli, Melvin M.: *The "Fourth Degree": The Lie Detector* 5 Vand. L. Rev. 549 (1952), pp. 549-559. The authors state: "The results of the lie detector test are of no value to the judge or jury until interpreted by the expert. In the same way, the x-rays, electrocardiograms or symptoms of disease are of no value until interpreted by the radiologist, cardiologist or doctor. It is at this point that the opposing party is entitled to cross-examination. He may cross-examine the expert on his diagnosis and the reasons therefor. *Id.* at 556."

establishes, instead, a collateral fact as to the examinee's awareness of, and belief in personal participation in the act in question. In this sense, the polygrams are indirect evidence of the commission of an act.[2]

The examinee who testifies in this recorded manner about himself can be measured for credibility only if he is normally alert, aware of the incriminating nature of the proceedings, willing to submit himself to the test, able to reflect and to recall, and is sensitive to social concepts of right and wrong. We say that such a person is "*responsive*" to the test, that he is emotionally sensitive to his environment to such a degree that he can furnish polygrams which can be reliably measured or interpreted.[3] It is impossible, so far as reliable chart interpretation is concerned, for a polygraph examiner to compel anyone to take the test, to compel anyone to testify against himself. Unwilling subjects are un-

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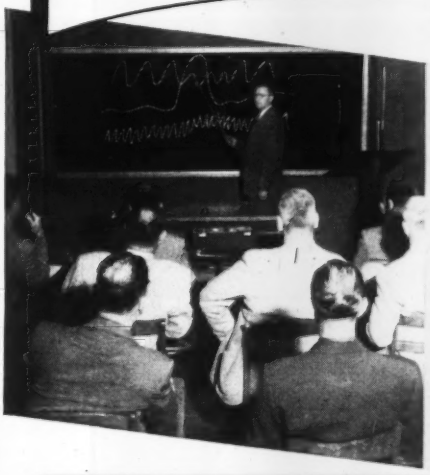

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[2] It is, of course, established by psychologists that eye-witness testimony is not highly reliable as legal evidence. Much more reliable is the conviction which is anchored in measurable reactivity of the autonomic and visceral responses of the human body such as the polygraph is able to record. Both observation of an event and oral testimony about it are often at variance with the internalized impressons.

This has been dramatically demonstrated in polygraphic and clinical studies of the psychopath, the psychoneurotic, the psychotic, and of "normal" individuals under great stress. Los Angeles police investigating the celebrated Black Dahlia murder were confronted by numerous *false confessors* who, at first, claimed to be responsible for the orgiastic death of the attractive young woman; polygraphic and clinical studies disproved their attention-getting confessions. Dr. Marcel Frym, criminological consultant of the Hacker Clinic (Psychiatry) of Beverly Hills, California, used the clinical approach in research on the false confessions in this case. Dr. Frym's clinical approach includes electroencephalography, psychometric testing and extensive psychiatric interviews with the confessors and their families.

[3] That the polygraph and the electroencephalograph have become useful tools for delineating the responsivity even of markedly abnormal persons has been established by the remarkable researches of three scientists working separately, Dr. Hudson Jost, formerly of the Psychophysiological Laboratory Department of Neurology and Psychiatry, University of Tennessee Medical School, Memphis; Dr. Robbert Lindner of Baltimore, Maryland, whose work was done largely at the Federal Penitentiary at Lewisburg, Pennsylvania, when he was Chief of the Research Division; and Dr. Chester W. Darrow, Director of the Institute for Juvenile Research in Chicago. Dr. Jost, now Chairman of the Department of Psychology of the University of Georgia, at Athens, has for 15 years used the Keeler polygraph as a research tool and he is now using it as a diagnostic aid capable of differentiating psychotic, psychoneurotic, and psychopathic states. Through these contributions the percentage of "uninterpretable" lie detection charts will be greatly decreased for professional examiners.

Darrow, Chester W.; Pathman, Julian and Kronenberg, Gisela: *Level of Autonomic Activity and the Electroencephalogram, J. Exper. Psychol.* 355 (1946) 355-365.

Jurko, Marion; Jost, Hudson and Hill, T. S.: *Pathology of the Energy System,* 33 *J. Psychol.* 183 (1952) 33:183-198.

Lindner, Robert M.: *The Place of the Polygraph and the Electroencephalograph in the Study and Treatment of Psychopathy.* 70th Annual Congress of the American Prison Association, New York, 1940. Pages 334-340; Experimental Studies in Constitutional Psychopathic Inferiority. Part 1, Vol. 4, No. 2 (1942) 252; and Part 2, Vol. 4, No. 3 (1943) 484.

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cooperative subjects, and the examination cannot proceed without the full cooperation of the person taking it. Evidence obtained from unwilling persons is apt to be so distorted by gross body movement that no one could interpret the charts. I know of not a single case in which force or intimidation has been used to secure consent.

Should a man take a test out of fear of social disapproval, or in grudging conformity with the practice of others in his group, reliable interpretations of the recorded bodily reactions are still possible. In fact, it is highly probable that more people take the test under such compunctions than because they volunteered to demonstrate their veracity. The fears that status will be lost if one refuses to take the test bear down upon every criminal suspect, to say nothing of the employee who searches his heart for a "reasonable" excuse for not taking the test. For example, in a group of 1,100 criminal suspects brought for polygraphic examination to the Chicago Police Scientific Crime Detection Laboratory, most of whom were suspected of felonies, only four persistently refused to take the polygraph tests—and of these four, three were later electrocuted for murder!

Experienced examiners find that it is a "guilty conscience," rather than a conviction that one is being denied the guarantee of immunity from self-incrimination, that persuades a few against the test. In a plant where several thousand employees periodically submit to a "check-up" by means of polygraphic interrogation on matters affecting the security of the plant and the United States, only six men have expressed unwillingness. Certain divisions of the Department of Defense, where polygraph tests are used, operate on the principle that all in a group concerned must take the test or else agree to be transferred to a "less sensitive" area. There is no abrogation of a man's right to continued employment or self-expression but he is placed in a position where it is unlikely that he could, if he would, become a security risk.

A guilty individual who clothes himself in the mantle of the Bill of Rights, rejecting a polygraph test on the grounds that it might incriminate him, is in a most vulnerable position psychologically, although legally he is on safe ground. The suspect who did not wish his latent fingerprints to be identified and introduced as legal evidence: the felon who tried to prevent the introduction of ballistic comparisons between his weapon and the bullet found at the scene; the drunk who protested against movies of his meanderings being shown to the jury; all have in common with the polygraph subject this fear: *the fear that a wrong they did against society will be found out through evidence they left behind.* One left a fingerprint; he wishes his finger had not done it! Another left a tell-tale weapon; oh, that his hand and brain had been more clever! Another walked stuporously in front of the camera; too bad he didn't have sense enough to be elsewhere or in another condition! And the other—the polygraph party—developed feelings of guilt and a neural and visceral agitation; and so he would hide any physiological evidence of guilt, any scars of conscience.

If a man has committed no crime, fear does not impel him to hide behind the words: "I refuse on grounds that I might incriminate myself!" In a democratic society the free citizen need not joust with the bogeys of superstition or withstand the historical ordeal to establish his integrity. With poise bred of self-respect and respect for the rights of others, he stands on the principle that every man is free to seek his own destiny—so long as he does not prevent others from doing the same. And the first tool he grasps to speed his progress is Science.

The lawyer who goes into court with his witness only to hear the witness tell a different story from that which he told in the lawyer's office, may wish he had first asked his client to take a polygraph test. The dismay he feels at being abandoned by his own witness is of the same order as that felt by indignant citizens when they saw on television racketeers refuse to cooperate with the Kefauver Committee by repeatedly concealing guilt through taking refuge in the right to avoid self-incrimination. Legal rights and moral considerations are not synonymous; while the person who voluntarily submits to a lie detector test may "incriminate" himself, in the ethical or religious view he is not necessarily entitled to sanctuary.

Of course we know that polygraphs are not mysterious hocus-pocus. They detect no lies; instead, they record the presence or absence of emotional conflict, of one's fear of being caught in a transgression against society, and only serve as a psychological stylet for the expert to probe psychologically one's self censure, one's conscience—that still, small voice that whispers, "Be careful or you'll get caught!"

POLYGRAPH METHODOLOGY

What foundation is there for considering polygraphic truth tests as

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scientific? What do the tests measure? Is credibility a suitable subject for scientific measurement?

The polygraph expert is essentially interested in emotion. There are verifiable general laws to which he has recourse. A large body of fact in the fields of psychology, physiology, psychiatry, and medicine, has been observed, recorded, and classified throughout the last half-century. This indicates that emotion is a state of motivated conflict or frustration, which may be active, suppressed, or repressed, although always unresolved. It appears as an undifferentiated state of conflict wherein the motives for resolution of the frustrations have inadequate opportunity or channels for release. Introspection or self-analysis may prove fruitless, but psychological and physiological tests can generally reveal some (although not all) of its aspects. Like electricity, we do not know precisely what it is, but we know much about what it will do. And one of the provable premises is that lying, for most people, is an emotion-arousing experience, accompanied by an alerted sense of opposition to law or to social expectations; and that truth-telling may or may not be accompanied by emotion, but that—if emotion is present—it is more general, more pervasive, less specifically attached to particular questions or stimuli than in lying.

The last 20 years have seen in the United States the development of systematic, objective methods and highly specialized knowledge for the accurate delineation of polygraphic patterns of truthfulness from those of lying, and from those of generalized tension, apprehension, excited anticipation, and several psychopathic, psychotic, and organic disease states.[4] Furthermore, it has been determined that, in order to differentiate between lying and truth-telling, it is necessary to use a "controlled" interview-recording situation, wherein, under conditions of strict privacy, scientific controls can be imposed. Sexual passion, hate, anger, mental confusion, resentment, excitement, jealousy, and grief are complicating states, for the elucidation of which extended testing, "control" questions, irrelevant questions, and "control tests" have been devised.

Our own experience with thousands of persons who have been subjected both to experimental frustrations, and to those crucial derogations of personal status which come when a man is openly accused of the most base and detestable offenses, convinces us that one is never safe in concluding that he is measuring emotion unless he takes the active conflicts of the criminal suspects or the mental patients. Simulated emotion in psychology classes, on the lecture platform, in drama, and in experimental laboratories has done more to clutter up and confuse

[4] Trovillo, Paul V.: *Deception Test Criteria*, 33 *J. Criminal Law, Criminol. and Pol. Sc.*, 338 (1942); Jurko, Marion; Jost, Hudson and Hill, T.S.: *Pathology of the Energy System*, 33 *J. Psychol.* 183 (1952); Baesen, Chung, YaYang: *A Lie Detector Experiment*, 39 *J. Criminal Law, Criminol. and Pol. Sc.* 532 (1948).

honest polygraphic reporting than all the quackery of 50 years.

The forensic psychologist does not base his methodology on laboratory experiments, nor does he whittle out pretty models of didactic perfection. He leaves it to the academician to explain that stresses in one person assume the shape of stomach ulcers, in another the form of asthma, in another the guise of a delusion or a psychosis; or that one person reveals stress in blood pressure, and another in respiratory lability. For, when the law catches up with a murderous culprit and he is probed systematically with the polygraph, emotion spills over in several channels, and then the examining psychologist is able to watch it, on his slowly moving chart-paper, in rising blood-pressure, in a gasp or in stifled breathing, in the slowed and ponderous thudding of the pulse, in spasms of muscles, or in one of the less celebrated tributaries of Stress.

And he knows that, in the graphs, this flooding is inconsistent and largely unpredictable as to course. He knows that if it is a major flood the central water-way will be the systolic blood pressure; if it is a freshet, the only spillage may be seen in the electrical conductivity of the skin; if it is a normal coursing, it may be followed in one or more of the several stream-beds of emotional excitation. However, from moment to moment the channels change; now he sees the storm build up in the rising blood pressure; next moment in the suppressed and tensed breathing; next moment in the discharge of muscle action. Change and persistence are the only predictable features. Momentarily its existence is not even assured. Now it courses madly; now it disappears beneath the surface where even the artful electrodes of the polygraph's galvanometer cannot get at it; and suddenly it roils up again as a turgid sump spreading into all channels of release.

THE POLYGRAPHIC TECHNIQUE IN ACTION

The technical facilities and effective recordings of these signs of stress are not complicated. Commercially available lie detectors are designed to operate on the basis of the scientific principle that bodily reactions or expressions reflect attitudes, beliefs, and various psychological states. Most instruments used by investigators and consultants use simple mechanical and pneumatic systems and need to be plugged into an electric outlet box only because the chart roll is actuated by an electric fixed-speed motor.[5] A physician's blood-pressure cuff is attached to the upper-arm; this cloth cuff contains a rubber, inflatable bandage connected by a rubber hose to the instrument, where it is affixed to a bellows. The bellows is a rubber and metal, or a corrugated, flexible, metal device closed at one end. Provision is made for a rubber bulb to inflate the bandage, which simultaneously inflates the bellows. To one end of this system is attached a pivoted writing pen which responds sensitively to every change in the volume of air in the bellows or tambour. The changes which occur are, of course, the pulse waves and the systolic and diastolic blood pressure variations picked up in the cuff on the subject's arm. A dial, called a sphygmomanometer dial, records the pressure in the cuff.

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A second attachment is likewise a simple mechanical and pneumatic system; a hollow, flexible rubber hose, closed at one end, fastened around the subject's chest, and opening at the other end into an extendable tambour within the instrument. A writing attachment records on the slowly moving chart paper all variations in air pressure within the system, the changes caused by the subject inhaling (distending the hose by chest expansion) or exhaling. In this way respiration rate and depth are recorded.

Electrodes and a recording psychogalvanometer, for recording changes in the resistance of the skin to the passage of a minute electrical current, are available on some polygraphs. The electrodes are generally affixed to the palm and back of one hand but may be attached to any two different skin areas. The recording pen from this part of the polygraph is activated electronically and is adjusted to record on the chart mid-way between the other two pens.

Other types of polygraphs, some commercially available but mostly experimental instruments, record muscle-action potentials, variations in the temperature of the skin on face and hands, voluntary and involuntary musclar movement, and the like.[6]

HOW THE TESTS ARE ADMINISTERED

As long ago as 1895, Dr. Cesare Lombroso,[7] Italian physiologist, was using deception tests, recording on

[5] (1) The Chatham and the Keeler Polygraphs, by Associated Research Inc., 3758 W. Belmont Ave., Chicago 18, Ill.; (2) The Berkeley Psychograph, by C D. Lee and Sons, Route 1, Box 53E, San Rafael, California; (3) The Deceptograph and the Darrow Photopolygraph, mfg. by C. H. Stoelting Co., 424 N. Homan Ave., Chicago 24, Ill. Associated Research, Inc. makes a special polygraph which operates without electricity, using a clock mechanism instead. The writer had occasion to use this instrument experimentally in an airplane in transit, for the recording of fears of parachuting from the plane.

[6] See Ax, Albert F.: *Physiological Differentiation of Fears and Anger in Humans,* mimeographed copy of address before American Psychological Association, Chicago, Sept. 3, 1951. Ax used an 8-channel Gross electroencephalograph with special transducers.

[7] Lombroso, Cesare: *L'Homme Criminel.* Felix Alcan, Editeur. Paris, 1895. Also see his *Crime, Its Causes and Remedies.* Boston, Little, 1912.

a revolving smoked-drum the variations in blood volume in the hand when criminal suspects answered questions. The histories of the scientific efforts to detect deception[8] are replete with evidence of the slow development of the idea that science and the scientific method can and should be applied to crime detection. Although European countries long were ahead of the United States in scientific crime detection, they have steadfastly turned a deaf ear to the suggestion that the instrumental detection of deception is a practical police tool. Police officials from abroad who have toured our cities and police departments, deprecate our use of lie detectors by poorly trained police operators untrained in scientific methods and mental disciplines.[9] Abuses in this country are cited as good reason for their failure to apply the technique abroad. In any event, the instrumental detection of deception remains a typically American, if not exclusively American, practice. Its use abroad today is, so far as I know, limited to the large-scale use in investigative and counter-espionage work by our Armed Services.

The technique used today is that popularized by Leonarde Keeler, who, until his death a few years ago, had through his earnest and zealous use of the "Lie Box" on the toughest police cases in the United States, become the symbol of the scientific policeman.[10] The training he received at the hands of Dr. John Larson, and August Vollmer (long the leading exponent of science in police work) set for him the task of converting police authorities to the use of the new psychological weapon. His technique, only slightly modified by later workers, is as follows:

In a quiet, private room, away from disturbing sounds, the subject and the examiner sit across a desk from one another. Compromising stimuli are reduced to a minimum. The examiner briefly discusses in a calm voice the nature of the test and the reasons for giving it, assuring the subject that if he is innocent of any complicity in crime "the machine will show it," and if he is guilty "the machine will show that too!" He assesses the subject's tensions and alertness, and endeavors at several points in the examination period to calm excessive tensions without unduly lowering the subject's ability to respond normally.

Some subjects may be permitted to talk, before the tests, to help them feel at ease, but loquaciousness is never allowed for it can siphon off feelings of guilt. The instrument will record the presence or absence of emotional conflict; and the skilled interrogator, interpreting the polygrams, will have no difficulty in differentiating the apprehensions of the innocent from the guilt complexes of the guilty. His objective attitude and rigorous control of extraneous stimuli will go a long way to prepare the examinee to furnish interpretable records.

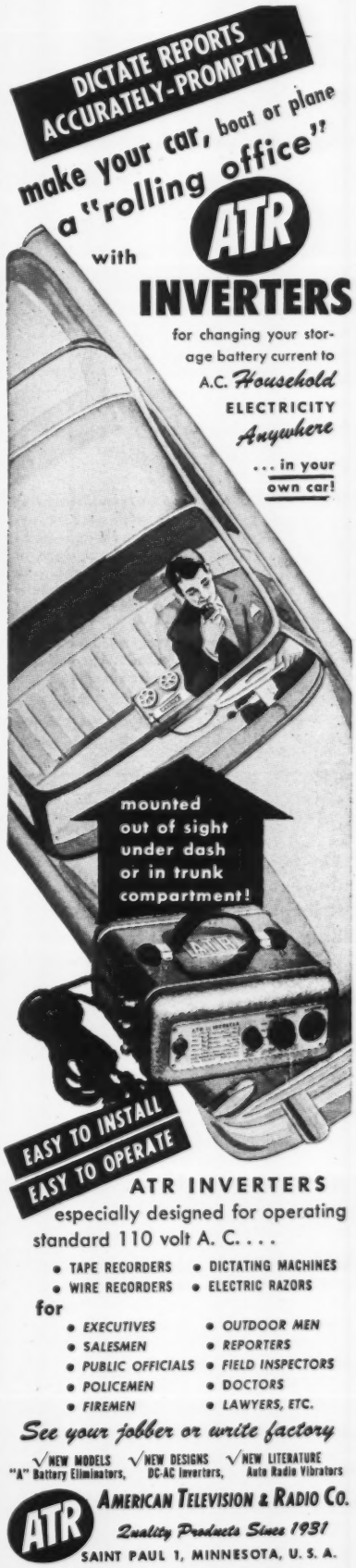
Sitting quietly, looking away from the instrument but not out a window, and answering all questions with a simple yes or no, are further aids to the streamlining of response controls. Experience shows that muscular movement, particularly of the hands or arms, and discussion beyond the simple replies of yes and no, so alter the recordings that they are uninterpretable. How obvious it is, then, that this test must be conducted with the full formal cooperation of the examinee. Lie evidence cannot be yanked out of an unwilling witness as a policeman might disarm a villain.

Mere formal cooperation is insufficient. The operator says: "Now if you speak the truth you have nothing to fear in this test, for I will see what the situation is. But if you are not telling me the truth I will find

[8] Larson, Dr. John: *Lying and Its Detection, Univ. Chicago Press*, 1932. Trovillo, Paul V.: *A History of Lie Detection*, 29 *J. Criminal Law, Criminol., and Pol. Sc.*, 848 (1939); see also 30 *J. Criminal Law, Criminol. and Pol. Sc.* 104 (1939).

[9] Rouwage, F. E.: *A Belgian Police Official's Impressions of His Travels in the U.S.A.*, 42 *J. Criminal Law, Criminol. and Pol. Sc.*, 237 (1949).

[10] See *The Lie Detector Prove Its Usefulness, Pennsylvania Chiefs of Police Association Bul.* (July, 1940), 19.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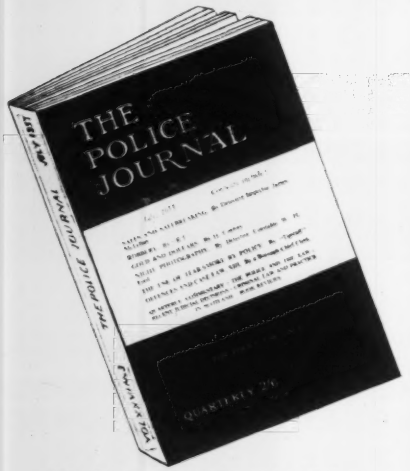

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that out and then we will want to sit down together and get this thing straight. Is that fair enough? You don't mind taking this polygraph test, do you?" The tenor of these remarks is to accentuate the intent of the truthful person to be steadfastly accurate in his story, and to intensify in the guilty the fears of being found out.

Reassurance that the pressure of the blood pressure cuff will do no harm, that discomfort will be noticeable in the arm only for the 2 or 3 minutes required for recording the questions and answers of the test, and that the arm sensations of tingling and throbbing are to be expected, tend to allay apprehension and to focus the interest where the examiner desires it—on the meaning of each question.

Although in criminal interrogation some of the questions used are general in nature, frequently a highly specific and precise terminology is employed, as indicated in the following section on Scientific Controls. In personnel work, where applicants for employment are tested, as in banks and other business establishments, and where employees are periodically re-examined as a form of integrity insurance, it is the examiner's task not only to try to determine whether an act has been committed but whether the individual is planning the carrying-out of an act.

In our examinations of this latter type on Atomic Energy Commission employees and the employees of their contractors, we ask questions designed to appraise the commission of an act, the intention to commit an act, the purposeful revealing of secret information to unauthorized persons, the knowledge of deliberate sabotage by other employees, and the association with un-American persons or organizations.

In the category of *acts* are these questions used by examiners of Russell Chatham, Inc. "Have you, to the best of your knowledge, answered all the questions in the application and security forms completely and truthfully?" "Have you ever been arrested for a criminal offense?" "Were you ever employed by a foreign government?" Periodic and work-termination questions probe for such acts as: "Since your last polygraph examination, have you intentionally revealed any classified information to any unauthorized person?" "Since your last polygraph examination, have you removed any uranium or classified products from the plant without authorization?" "Since your last polygraph examination, have you disposed of any uranium or other classified products in an unauthorized manner?"

Intention to commit acts is similar in psychological analysis to attitude, although the latter is apt to be more diffuse and less well fastened to a specific goal or set of objectives. Take these two questions as examples: "Do you intend to do any dam-

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age to this project or the United States?" "Are you in sympathy with Communism or the Communistic form of government?"

There is justification for asking these questions. A man's intent is one facet of his character. Trustworthiness is based on intent. In a national survey of employers it was discovered that, of all the sought-for qualities of a good employee, such as skill, experience, promptness, etc., the quality which was at the top of every employer's list, and which he rated as most important, was trustworthiness or dependability.

In the polygraphic examination of criminal suspects one does not ask about a man's plan to commit a crime, but rather about the commission of a known act. In tests, on the other hand, of personnel who must be selected or retained in employment only if they can be depended upon to keep secrets, the revealing of which might endanger the security and the very existence of one's Country, to know a man's honorable or dishonorable intent—his dependability or integrity, is of paramount importance.

Also, the asking of such questions on re-examinations periodically, reminds the employee of the importance of Security and, it has been found, materially reduces loose talk, thus acting as a preventative or a psychological vaccination against undisciplined behavior. So, we ask: "Are you in sympathy with any organization which might be called un-American?" "Do you intend to live up to the security regulations of this project?"

But intent and sympathy questions are reinforced with: "Do you belong to any organization whose purpose is the overthrow of the United States form of government?" "Do you have any relatives or friends (that you know of) who are connected in any way with any organization that might be called un-American?"

Several safeguards were used at Oak Ridge to enable the polygraphic examinations to be conducted in a minimal period of 20 minutes: (1) Employees previously had a full background investigation and "Clearances" issued by personnel-clearance officials of the Atomic Energy Commission. (2) At least two separate tests were given each employee on every testing occasion. (3) Provision was made for further testing and use of supplementary questions if, *for any reason*, re-examination was indicated. Questions were so designed that they might be elaborated on or re-phrased if necessary. (4) All polygrams obtained by field examiners were analyzed at a central office by reviewers. ★★★

ARITHMETIC

A motorist was 100 yards from an open level railway crossing and was proceeding at 50 miles an hour. A train was also approaching at 60 miles an hour, and its distance from the crossing was 375 feet. *Problem:* Did the motorist get across? *Solution:* Yes, the motorist got a cross. His widow bought it out of the insurance.

The Certification Program of the Academy for Scientific Interrogation

EDITOR'S NOTE: *This is the last in a series of four articles on the Certifications Program of the A.S.I. prepared by Albert L. Breitzmann, Secretary of the Certifications Committee.*

THE Certification program of the Academy for Scientific Interrogation was printed in its entirety in the January-February, March-April, and May-June issues of POLICE. This fourth article is written to discuss the history of the program; clarify still further some points where misinformation has led to confusion; and to generally summarize the Certification work to date.

Up to this time five members of the Academy have been Certified. Seven other members are at various levels of the examinations, with two of these seven expected by the Committee to be ready for Part III examination which is to be given on August 19 and 20 just before the annual meeting in Hot Springs, Arkansas. The above figures indicate that Certification was not readily accepted by the members. At the beginning even the most optimistic members did not anticipate that the Committee would be deluged by applicants, but a better response was thought to be inevitable. After the first year this most worthwhile program slowed down to a walk. Some of the reasons for this slowdown are listed below.

The first discussion centered around the question, "Who are they (the Committee) to examine us?" As individuals, the committee members do not profess to have more ability than any other member and they do not attempt to set themselves up as little gods to rule on the ability, merits, or morals of others. They feel that they have an exacting, time consuming, and sometimes distasteful job to do for the good of the Academy. It is their job to protect the interests of both the applicants and the Academy. In this case the question "of the chicken or the egg coming first" is answered because the Certification program was voted on during a regular business meeting, and as a result the Committee was formed to represent all of the members.

Some of the members feel that all Active members should be Certified under a "grandfather clause." They want their status of Active member to automatically imply that they have all of the necessary qualifications to pass the Certification examinations. Obviously this blanket coverage would destroy all value of the program.

Fear of failure has been a deterrent to some. Some fear the written and oral portions of the examinations, and others do not want to be the subject of a polygraph examination as required in Part III. Fear of lack of necessary information can be overcome by studying various books. The Committee recommends: *Lie Detection and Criminal Interrogation*, by Fred Inbau, published by Williams and Wilkins; *Instrumental Detection of Deception*, by C. D. Lee, published by Charles C Thomas, Publisher; *Primary Anatomy*, by Cates and Basmajiam, published by Williams and Wilkins; *Machinery of the Body* (4th edition), by Carlson and Johnson, University of Chicago Press; *Legal Medicine*, by Gradwohl, published by Mosby (chapter by Dr. Matthews on Narco-Interrogation and chapter by Dr. H. P. Lyle on the polygraph); *Nervous System*, by Frank Netter, published by Ciba; *How to Recognize and Handle Abnormal People*, issued by the National Association of Mental Health, Inc.; and *No. 24 College Outline Series General Psychology*, by Friar Henry Sparks, published by Barnes and Noble.

The only thing that can be done for the person who fears the polygraph examination is to apprise him of pertinent question content. He will be asked if he knows any reason why he should not be Certified; if he has ever been charged with a misdemeanor; if he has ever been charged with a felony; if he answered all questions on his application for Certification truthfully; if he has ever rendered a false opinion as the result of a polygraph examination for financial gain or political favor; if he has ever accepted a bribe; if he is loyal to the government of the United States; and a question about homosexuality. If there is something in his past life that would keep him from passing such an examination, he should not apply in the first place.

The $100.00 fee has entered into the picture, too. Some have said that they can't afford this amount. This fee was set at this level to instill in the applicant's mind the seriousness of the endeavor, and also to insure sufficient funds to conduct the examinations without using money from the Academy treasury. Provisions can be made for true hardship cases, because the Committee has the right to waive all or part of this fee. Some have said that they have no hope of ever gaining from such an investment because they work for a salary for a governmental agency. The answer to that is that three of the five now Certified are so employed.

It seems that the future of Certification by the Academy lies in the hands of the younger men in the field. Most of them have had proper training at the beginning of their careers, including ethics. If there was ample moral fiber present to withstand the temptations of our present civilization, then these men (and women) should be looking forward to the realization of what should be the ultimate goal of all polygraph examiners. ★★★

IN CASE YOU'RE TRAFFIC MINDED

A Case for Traffic Law Enforcement

By Chief Roy J. Bergman

EDITOR'S NOTE: *Chief Bergman joined the Oklahoma City Police Department in 1930 as a Patrolman and has had the privilege of serving in every division and on every type of assignment in the Department. Promotion succeeded promotion through the years as he moved from rank to rank to become Inspector or Assistant Chief of Police in 1943. He served in that capacity until 1954 when he was appointed Chief of Police on the retirement of the preceding Chief.*

Chief Bergman is working on a program of Departmental and individual improvement which includes the raising of the standards of recruitment, a recognized professional training program and the establishment of a merit system for promotions on a competitive basis. In the following article, Chief Bergman directs attention to a development that is attracting increased attention among police administrators—gearing the power of the patrol force into the traffic operations of the Department.

THE year 1949 started the rise in traffic accidents and fatalities in Oklahoma City, a rise that continued until 1953, when it reached a nine year high of twenty-nine deaths.

An excellent public safety information and education program continued through these years but did not halt the increase. Up until that time, our Traffic Division dominated our traffic safety program, doing a commendable job that resulted in awards by the National Safety Council and the I.A.C.P. for three of these years.

In the latter part of 1953, during a discussion of what could be done to combat the rising traffic death toll with the Oklahoma City Safety Council, City Officials, the Traffic Judge and other interested persons, we decided to step up sharply our traffic enforcement program, adopt a new policy in the mechanics and procedure of handling traffic violators, and bring into the enforcement picture the Scout Car Division and all uniformed personnel.

It would be well to mention here that until this time we, as many other departments are still doing, put very little stress on the use of our Scout Car Division in traffic enforcement work, believing that it could or would interfere with their patrolling and in the prevention, apprehension and detection of crime, with the natural result that the average officer ignored all violators except the very flagrant. The public also knew this, which placed very little value on the appearance of a marked police car as a deterrent on the average violator.

ENFORCEMENT INCREASED

Our intention to step up enforcement was given the necessary advance publicity and an educational program was started with the goal in mind of selling the officer himself on the necessity and the value to the community of such a program, so that the officer's contact with the offender would serve a double purpose—a properly conducted arrest, and a personal explanation and an appeal to the motorist for his or her cooperation in an effort to save lives.

This educational program consisted of semi-monthly assemblies of the Department, at which time a speaker was selected from among safety, civic, and community leaders and City Officials, all of whom voiced their interest, announced their support and offered sound advice on how such an effort could be made and accepted favorably by the public. The human relations element was thoroughly explored during these meetings. The planning phase proved a major contribution to the success of the program.

Address: Chief Roy J. Bergman, Police Department, Oklahoma City, Oklahoma.

ABOVE: *Officer testifying by demonstration in City Traffic Court.*

RIGHT ABOVE: *Scout Car Officer Sam Watson making a hazardous moving violation arrest.*

RIGHT BELOW: *Motorcycle Officer S. W. Stephens observing a high accident location for violators.*

The Plan

On January 1, 1954, orders were issued by the Chief of Police that effective immediately, a stepped up enforcement policy would go into effect, pointing out that the Traffic Division would continue their efforts to operate in a selective manner, concentrating on the high accident locations and on the violations causing the most accidents at the times they were happening; that the Scout Car Division would start making arrests for moving traffic violations wherever and whenever they saw them, when they were not actually on a call. Detectives and Vice Squad officers were asked to patrol the taverns and hot spots where the drinking driver could originate in an effort to pick them up before they had a chance to become involved in an accident. Scout Car officers were instructed to limit their traffic activities only on the late night shift to flagrant violators in order to free them for their regular crime prevention patrolling activities.

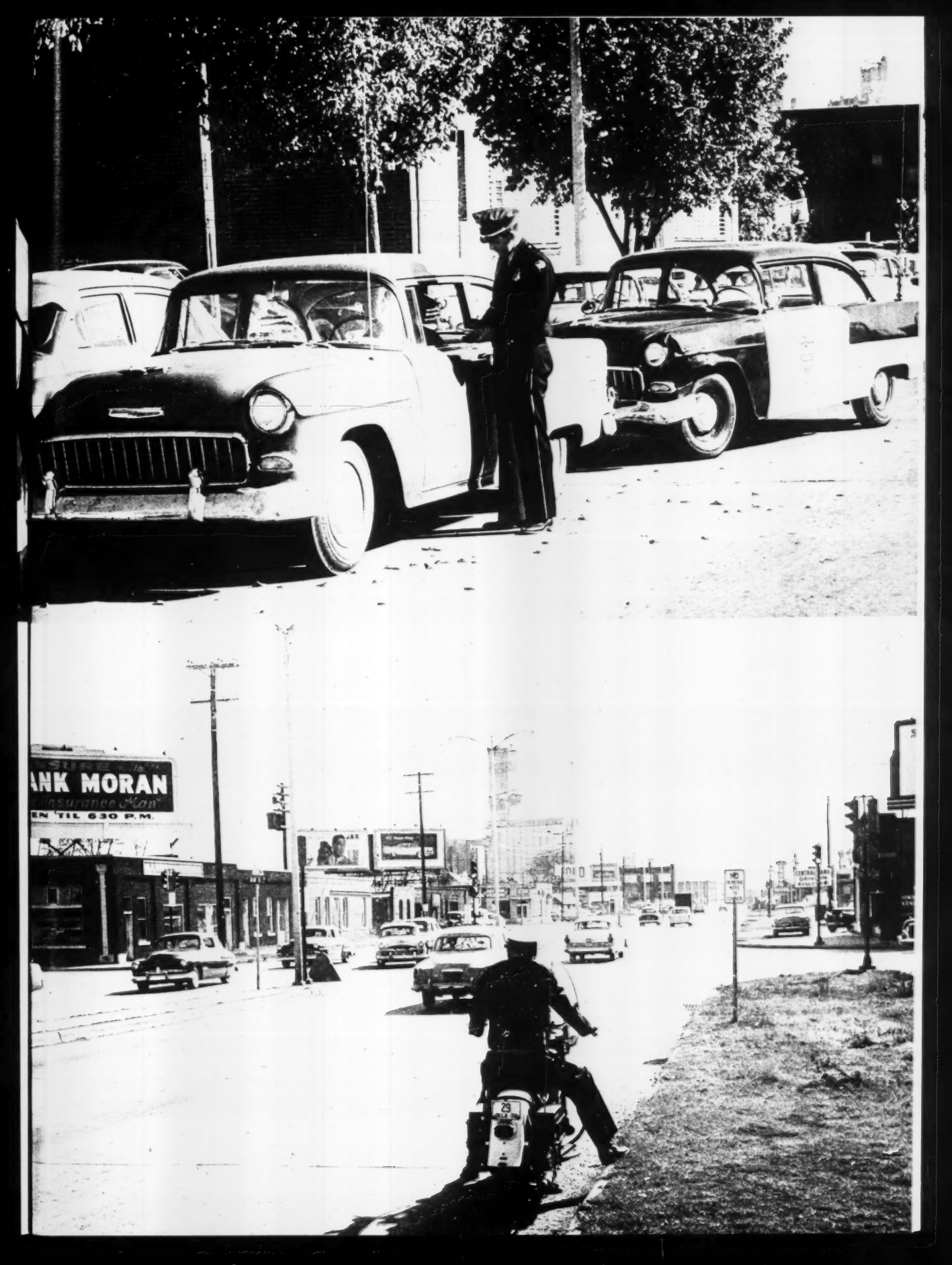
There was an immediate response on the part of the officers and the combined and concentrated effort to correct the bad driving habits of our citizens had begun.

The big question was—will it produce results? This is the answer:

The Results

In 1953, and the preceding five years, moving traffic violation arrests averaged 24,000 a year. In the first year of the new program, 1954, arrests jumped to 51,000 and the result! Traffic fatalities dropped from twenty-nine to seventeen. In 1955, arrests rose to 58,000 and fatalities remained at seventeen. In 1956, this enforcement program continued. Arrests rose to 62,000 and fatalities were held to eighteen. The three year total with enforcement was fifty-two fatalities; the preceding three years with *token* enforcement totaled seventy-nine fatalities; reduction, twenty-seven deaths. Did traffic activities interfere with the Scout Car Division's criminal work? Actually, criminal apprehensions have increased. Major crimes have been decreased!

This is happening at a time when traffic deaths have increased to an all time high across the state and the nation. Our city, during this three year period, has grown from fifty-six to seventy-seven square miles, with the addition of some 3,000 new intersections, many of which had been high accident locations, with no increase in police personnel. The accident rate has remained about the same, despite the twenty-one square mile increase in area and an increase in auto registrations, indicating that the saving in lives has been brought about by a reduction in speeding and the arrest of the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drinking driver before he has had an accident—two of the principal fatality producing accidents.

THE JOB IS NOT COMPLETED

We know there remains a big job to do—a real challenge for the police as long as the number of automobiles increase, automobiles with more power and more speed, and as long as the traffic death rate is taken so much for granted.

But I believe that the past three years' experience in Oklahoma City demonstrates that enforcement is the foundation upon which a good traffic safety program can be built if it is properly administered. Such a program must have the support of the public officials, the Traffic Court, Traffic Engineer, the Safety Council and the public information media. This we have in Oklahoma City and it has formed a real effective team.

Adding to the 3E's, Engineering, Education and Enforcement, three more very important and necessary E's —Energy, Effort and Enthusiasm, have made our program effective.

Encouragement for continuing this effort comes in the form of a quotation from the analysis made by the International Association of Chiefs of Police and the National Safety Council of this city's 1955 activities which resulted in an outstanding achievement award:

> Oklahoma City's performance fulfilled measured 89 per cent. As before, a *commendably* strong operation was shown. This analysis, therefore, undertakes not so much to criticize as to point out for further improvement an *already good program.*

Let's face it—we can all agree that no one likes to be arrested, and I know from experience that a policeman does not like to make a traffic arrest, but here it seems a necessity that the Police Department perform, and the citizens conform, to this type of safety education enforcement—one with the "dollar penalty" attached—if we are to have the privilege of living in a city made as safe as possible by Police and community effort. ★★★

DEATH AT THE CROSSING

Nine out of 10 of the deaths and injuries in grade crossing accidents resulted from collisions of motor vehicles and trains. The principal circumstances of the accidents were:

1. Four out of 10 accidents occurred at grade crossings protected by gates, lights, bells, watchmen, or combinations of these methods of protection.
2. Six out of 10 accidents involved trains that were traveling less than 30 miles per hour, or were not moving. Approximately half of the motor vehicles were traveling at this speed or less.
3. Fifty-six out of 100 accidents occurred in daylight.
4. Fog, rain, snow, sleet or hail was involved in only about one out of 10 grade crossing accidents.

Accident Facts (1956 Edition)

"ANTI-ACCIDENT VACCINES?"

It would be fine if scientific research could turn up an anti-traffic accident vaccine. Where is the Dr. Salk of traffic safety who will develop a serum to provide immunity from traffic accidents?

Wouldn't it be wonderful if children could be vaccinated against darting out from behind parked cars; older pedestrians immunized against crossing between intersections; and motorists given a "stop at STOP signs" serum!

Sounds silly—but how *can* we wage war on traffic accidents as we do on cancer, polio and other killing and crippling diseases?

We cannot legislate traffic safety. True, there are traffic laws but they prevent accidents *only* to the extent they are obeyed. Traffic engineers and public officials are building safety into the streets and highways. But how are we to build safety into drivers and pedestrians?

The picture isn't completely black. Traffic safety experts are coming up with the answers, and the first step is to involve the public more and more in traffic safety activities. More and more communities are setting up Citizen Safety Councils to back up the work of their officials and official traffic advisory committees. These citizen councils, made up of representatives from civic, business and fraternal organizations and of individual citizens, carry the word to all groups in the community.

The National Safety Council's year-long program, "Back the Attack on Traffic Accidents" has these basic goals—stepping up of all official traffic action, personal improvement as drivers and pedestrians, support for official activities and building up of local safety councils in their efforts to promote an effective and continuing traffic safety program with widespread appeal.

DID YOU KNOW?

Do you know there is a definite relationship between violations involving traffic signs, signals and pavement markings and the high traffic fatality toll?

If you don't believe it—HERE ARE THE FACTS:

. . . Three out of 10 drivers involved in fatal accidents exceed speed limits or safe speeds.
. . . One out of 10 fail to keep to the right of the center line.
. . . One out of 10 did not have the right of way or passed improperly.
. . . One out of 20 disregarded "STOP" or warning signs.

Of course you *do* know that an automobile is more maneuverable and can stop more quickly than a train. But it may surprise you to learn that in one-third of highway-railroad crossing accidents, the auto strikes the train—and furthermore that 4 out of 10 grade crossing collisions occur at crossings protected by warning signs, crossing gates, flashing lights, bells, wig-wag signals or watchmen in addition to the crossbuck and round warning signs.

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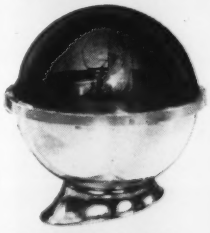

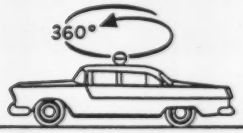

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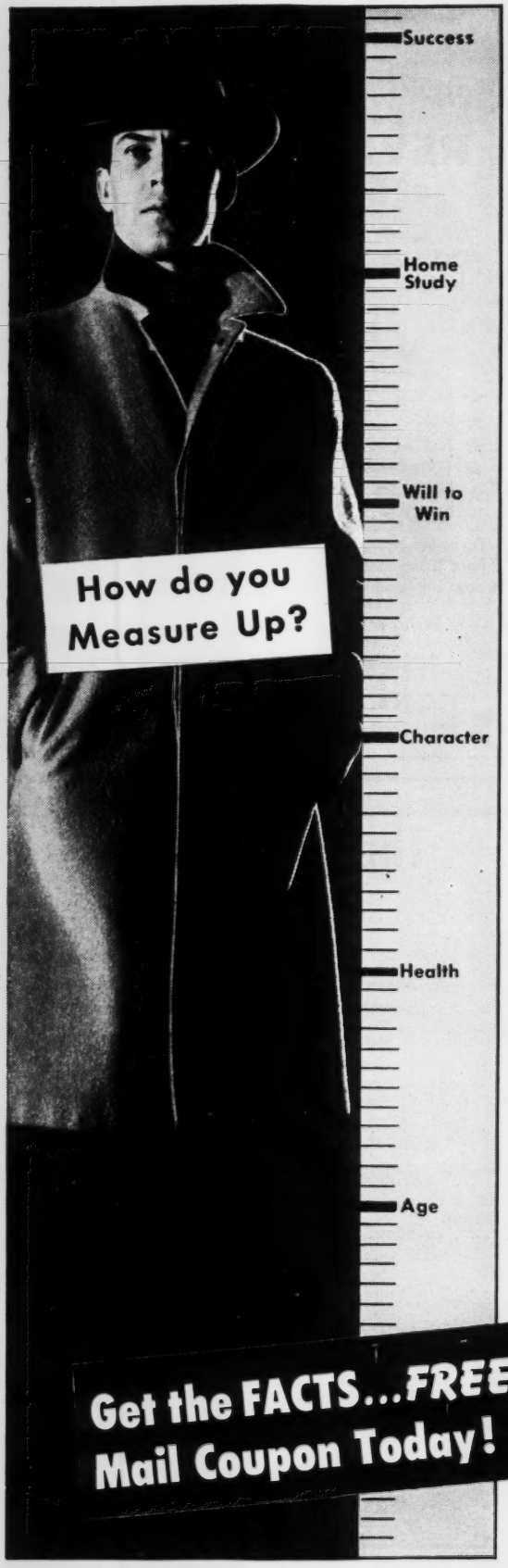

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Recent Additions to the Foreign Lottery Family

By Sergeant John Drzazga

EDITOR'S NOTE: *Sergeant Drzazga of the New York City Police Department retired March 5, 1957. In this important article written exclusively for POLICE, he directs the attention of the police and other law enforcement agencies to the continued infiltration of foreign lottery activities into the United States. The reader will be interested in what he has to say regarding two new lottery organizations operating from their headquarters in Germany and Malta. Since the sale of lottery tickets is prohibited or restricted in all States and since the transportation of lottery tickets in foreign or inter-state commerce is a violation of the Federal laws, every law enforcement officer will want to make careful note of the information which Sergeant Drzazga makes available in this article.*

THE NORDWESTDEUTSCHE KLASSENLOTTERIE (Northwest German Class Lottery) is a newcomer in the lottery field and has replaced the old Hamburger Klassenlotterie. It was organized by the provinces of Nordhein-Westfalen, Niedersachsen, Schleswig-Holstein, Freie und Hansestadt Hamburg, and Freie und Hansestadt Bremen. The lottery is operated under the administration and supervision of a Board of Directors appointed by the provinces.

DEFINITION OF A LOTTERY

A lottery is a scheme for the distribution of property by chance, among persons who have paid or who have agreed to pay a valuable consideration for the chance, and the name by which this scheme is known is immaterial.

Generally, the three essential elements which make up a lottery are consideration, chance and prize.[1] All of these elements are present in The Nordwestdeutsche Klassenlotterie.

ORGANIZATION

In the lottery now in progress, 111,000 tickets were issued, plus a like number of tickets bearing letters A to H prefixing the number. The lottery is subdivided into six classes of three drawings each. Prizes, numbering 43,058 in all and two premiums (top prizes) are scheduled for distribution. Tickets in this lottery which bear letters A to H prefixing the number are known as eight-tickets, as they represent one-eighth of a share. Tickets without the letters represent a full share. The Board of Directors reserve the right to make any essential alterations in the lottery.

The lottery ticket is valid only for the class for which issued. A renewal fee must be paid to the lottery office to participate in each succeeding class.

The price of a ticket for each class is $8.00 in U. S. Currency and $1.00 for an eight-ticket. The cost of participating in the six classes of the lottery is $48.00.

Each month, a class with three drawings is held. If the ticket does not win in one drawing of a class, it takes part in a second drawing without extra pay. If it does not win in a second drawing, it takes part in a third drawing of the same class without additional cost.

If the ticket did not win in all three drawings of a class, it can be renewed for the next class of three drawings by the payment of a like renewal fee. The winning ticket is given the prize alloted to it and it is barred from further drawings. The top prize of each drawing is $25,000, however, in the sixth class, the maximum prize may reach $125,000.

Where the payment for the ticket is made in foreign currency, the prize is transmitted in such foreign currency. Foreign clients transact business through the mail, albeit such practice is unlawful in this country. This lottery is popular with persons of German descent residing in the United States.

THE DRAWING

The examination and the mixing of the ticket number rolls and the prize rolls in separate wheel drums, as well as the drawing take place publicly in the Drawing Room or Hall of the Freie und Hansestadt Hamburg. Drawings begin at 8:30 A.M. of the designated day.

At each drawing, the number of lottery rolls drawn coincides with the number of prize rolls drawn. Any disputes concerning the lottery are decided by the Board of Directors. A drawn number ticket is barred from further participation.

All appeals from any decision of the Directors are made to the Finanzbehorde (Treasury) of the Freie und Hansestadt Hamburg.

PRIZE LISTS

Printed official lists of winners can be bought or inspected at the lottery collector's office after each drawing.

Address: Sergeant John Drzazga, 7400 Kessel Street, Forest Hills 75, New York.

[1] Peo. v. Cadle, 1952, 202 Misc. 415, 114 N.Y.S. 2d 451.

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THE MALTA GOVERNMENT LOTTERY

The Malta Government Lottery is operated by the Public Lotto Department, which is located at 74 Old Bakery Street, Valletta, Malta. The 14th drawing was scheduled for March 31, 1957 in Palace Square, in Valletta. The counterfoils are drawn from a drum as usual. The revenue is used for the purposes designated by law, usually for governmental purposes. This lottery is operated pursuant to the Government Lotteries Act of 1948 and regulations promulgated thereunder.

PAYMENT OF PRIZES

A tax of 20% is deducted by the Treasury before the payment of a prize. Payment cannot be claimed prior to the expiration of fourteen days from the last day of the drawing.

A participant can give notice of loss of a ticket to the lottery office, and payment will be stopped, if it had not already been paid. Payment is made to the person giving notice of loss, if no other claim is made. If a winning ticket is not presented for payment within two months of a drawing, any claim to payment thereon is forfeited.

DRAWINGS SCHEDULED FOR THE CURRENT LOTTERY

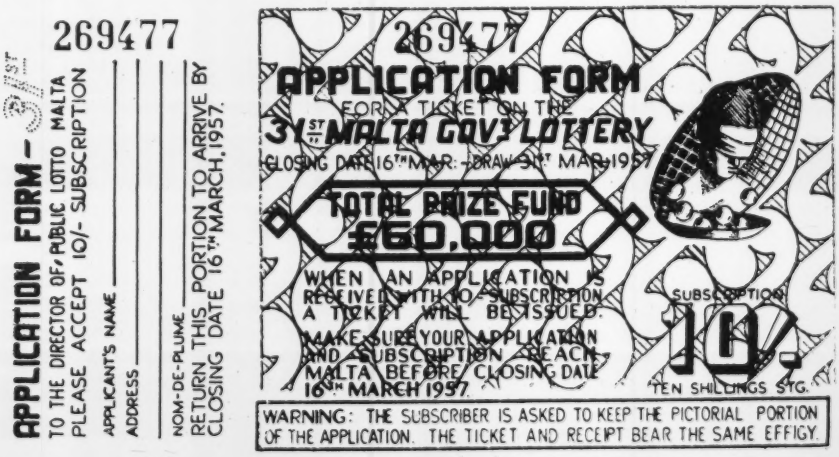
First Class—February 13, 21 and 27 (3,500 prizes)
Second Class—March 14, 21 and 27 (5,000 prizes)
Third Class—April 10, 17 and 24 (5,000 prizes)
Fourth Class—May 8, 15 and 22 (5,000 prizes)
Fifth Class—June 5, 13 and 19 (5,000 prizes)
Sixth Class—July 2, 3, 4, 5, 8, 9, 10, 11, 12, 15, 16 and 18 (19,558 prizes and 2 premiums)

SCHEDULE OF PRIZES FOR MARCH 31, 1957

1st Prize	.....	35,000 pounds
2nd Prize	.....	10,000 pounds
3rd Prize	.....	4,000 pounds
4th Prize	.....	1,500 pounds
5th Prize	.....	1,000 pounds
6th Prize	.....	600 pounds
12 Prizes of 200 pounds each		
30 Prizes of 100 pounds each		
28 Prizes of 50 pounds each		
44 Prizes of 25 pounds each		

GEOGRAPHICAL DESCRIPTION

Malta is a British Crown Colony consisting of a group of islands in the Mediterranean Sea, fifty-eight miles due south of the coast of Sicily. It has an area of 122 sq. mi. and a population of 316,619 according to 1953 census. The civil population is chiefly engaged in farming. The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WHEN AN APPLICATION IS RECEIVED WITH 10/- SUBSCRIPTION A TICKET WILL BE ISSUED.
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WARNING: THE SUBSCRIBER IS ASKED TO KEEP THE PICTORIAL PORTION OF THE APPLICATION. THE TICKET AND RECEIPT BEAR THE SAME EFFIGY.

Malta Government Lottery ticket.

islands were annexed to the British Empire in 1814 following the Napoleonic wars. The main island, Malta, had been converted into a base for the British fleet.

The total amount being 60,000 pounds. If the sales should exceed 450,000 tickets, residual prizes will be paid in addition to the above. A copy of the winning numbers in a drawing is sent by air mail to the various participants.

The results are also broadcast on the Monday following the drawing between 8:00 P.M. and 9:00 P.M. on the Pan-American Broadcasting Station in Tangiers (20 meters, 15,048 kilocycles).

TICKETS SALES

Most of the tickets sold in this country are sent through the mail. The monetary unit of Malta is the Pound (20 shillings). At the current rate of exchange, this is about $2.80 in U. S. currency.

The tickets are sold in the U. S. at 2 for $3.00, and in Malta they are sold for 10 shillings each. Upon forwarding payment and the application stub, the participant receives an official receipt and tickets.

LAWS

The sale of lottery tickets is prohibited or restricted in all States, and foreign lottery tickets are no exception to this rule.

The importation or transportation of lottery tickets in foreign or interstate commerce is prohibited by the U. S. Code.[2] The depositing in the mail of any matter pertaining to a lottery is also prohibited. This includes any payment for the purchase of a lottery deposited in the mail.[3] The aforementioned violations of the U. S. Code are punishable by imprisonment not exceeding two years or by a fine of not more than $1,000, or by both. ★★★

[2] Title 18, Chapter 61, Sec. 1301.

[3] Title 18, Chapter 61, Sec. 1302.

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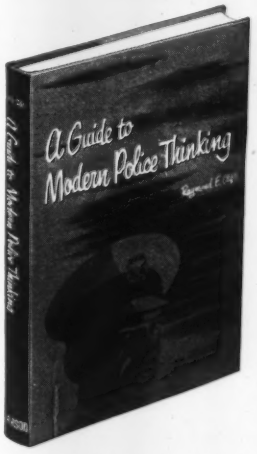

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Die Ziehungen der sechs Klassen finden an den im amtlichen Spielplan festgesetzten Tagen statt. Die Lose der folgenden Klasse gehen den Spielern jeweils 10 Tage nach der Ziehung mit der amtlichen Gewinnliste unaufgefordert zu.

German Lottery ticket of the type sold in this country. A fraud order had been issued by the Post Office Dept. against the shipper of these tickets into this country and the notice appeared in the Postal Bulletin (#20011) of February 7, 1957.

Operation House Watch

By R. S. Seares

EDITOR'S NOTE: *Robert S. Seares entered the Pasadena Police Department on May 1, 1932. He advanced through the ranks to the position of Assistant Chief of Police in 1946. In 1954, he became Chief of Police in the City of San Marino. During World War II he served with the Corps of Military Police in the Southwest Pacific. One of his assignments was to assist in the re-organization of the Manila Police Department. He attended Stanford University, FBI National Academy and, for several years, has been a part-time instructor of police courses in the School of Public Administration at the University of Southern California. He is past president of the California Division, International Association for Identification, and California Chapter, FBI National Academy Associates. He is presently Second Vice-President of the Los Angeles County Peace Officers' Association and Secretary of the Training and Education Committee, California Peace Officers' Association. He is a member of the Society for the Advancement of Criminology. In the following article, Chief Seares describes a tested public relations device which can be put to work effectively in any police department.*

HIGH on the list of identifiable "police hazards," a term used by August Vollmer to describe any situation that may induce an incident calling for some police action, is the temporarily unoccupied residence. When the householder locks the front door, loads his wife and children into the family car, and takes off for a long weekend or for a month's vacation, he often leaves an attractive and accessible target for some enterprising burglar. If the thief is reasonably cautious he may enter the house, ransack it in a leisurely manner, carefully select from an assortment of clothing, silverware, jewelry and other valuables, and leave with very little danger of detection.

Any experienced detective is acutely aware of the problem. He has talked to many house burglars. He has heard them brag about how long and with what ease they operated before a "bad break" led to their arrest. As he ponders the hours upon hours of effort devoted to a single case he may wearily conclude he is involved in a vicious circle. As the crime rate goes up the detective's job increases. This lessens the probability of prompt apprehension of offenders. This emboldens the criminal to greater activity. The crime rate continues to climb and the investigative load gets still heavier.

While obviously not the entire answer to the problem of residence burglary, the close inspection of vacant homes, sometimes referred to as the house watch, is a preventive measure which many police officials believe to be an effective device for reducing the hazard. It is as old as police work, but it is a technique which has fallen into disuse in many cities because of the ever increasing demands upon the police for other services.

The house watch is an arrangement whereby persons who are going to be absent from their homes for any period of time from a few days to several weeks notify the police department in advance of departure. They furnish the police with the expected inclusive dates of absence, a local reference to be contacted in event of emergency, and other information such as the identity of relatives, friends, or employees who might have reason to be on the premises during the householder's absence. The police department then arranges for an officer to check the vacant property at regular intervals, usually at least once a day and sometimes as high as three times a day. The inspection involves more than just driving by the address in a patrol car. The officer circles the house on foot, checking doors, windows, and other openings and observing closely for any condition which bears further investigation. The officer removes advertising circulars, newspapers, and other telltale indications of the owner's absence. Finally, a record is made of the exact date and time of each inspection.

Most departments make use of beat officers for this task although some handle it as a special assignment. Close inspections usually are made only during the daylight or early evening hours which means that the bulk of this activity takes place on the day watch with the graveyard and night watches taking a more active part during the summer months when there is more daylight and when, because of vacations, the load is heaviest. Officers are furnished lists or books containing the locations on their beats which require inspection. Corrections are made daily from information concerning new departures and returns as received and recorded at headquarters. Officers are instructed to spread their house checks throughout their tours of duty and to avoid checking the same property at the same time each day. Avoidance of any pattern is important for the same reasons that any patterned approach to foot or automobile patrol should be avoided.

The extent to which the house watch actually is employed by police departments is difficult to determine. This writer has talked to many chiefs of police, particularly in the Southern California area, and has found almost universal approval of the house watch as an effective crime deterrent and as an excellent method of building good public relations. On the other hand, it was quite apparent that relatively few of the departments contacted were engaging in a full scale program. Quite

Address: Chief R. S. Seares, Police Department, San Marino, California.

a number of the chiefs reported that, while they professed to maintain a house watch, in reality the service was quite limited, consisting mainly of recording a householder's absence and then having the beat officer "keep an eye on the property" as he drove by in a patrol car. Others reported a genuine effort to conduct a regular check of vacant property, but admitted that other demands upon available police time often forced this activity to be neglected. At best, the service was sporadic. Out of more than forty cities in the area, probably not more than half a dozen could be said to be consistent in doing a full fledged job.

From the standpoint of crime prevention there are several obvious advantages of the house watch. The police are provided with the information that a given residence is temporarily vacant. If this information is recorded and given to beat officers, some good has been accomplished even though periodic close inspection of the premises is not the practice. The beat officer is alerted to give closer attention to the property and to investigate any condition which might appear to be unusual when associated with unoccupied property. Some cities which do not maintain a regular house watch do encourage residents to report their absences and the police attempt to check the property at least once soon after the scheduled time of departure. This check often discloses that the resident, in his haste to leave, neglected to lock a door or window. The police are able to correct the condition and perhaps prevent a burglary by making entry more difficult.

An initial check soon after the intended departure is reported appears to be standard practice in those cities which maintain a house watch. Some departments attempt to make contact with the resident before departure in order that the officer may have an opportunity to suggest security and saftey measures which may not have occurred to the householder. Other cities make contact with the neighbors and solicit a call in the event the neighbors observe anything that arouses their suspicion.

Every chief of police is familiar with the problem of maintaining regular patrol in the residential areas of the city. Some streets are frequently neglected in spite of whatever methods are employed to insure coverage. The house watch does help to solve this problem. The necessity of checking houses forces patrol cars onto streets which otherwise might be skipped. If proper precautions are taken to make certain that these checks are made at irregular times, thus avoiding the "milk route" effect, the impression is created that a police car may be expected in any area at any time. Police cars are observed, not only by the residents who receive reassurance that the police are on the job, but also by those with criminal inclinations. The apparent omnipresence of policemen provides the deterrent effect.

The regular close inspection of unoccupied houses enables the police to promptly discover evidence of entry and to investigate to determine whether or not a crime has been committed. Through information recorded at headquarters when the householder departed contact can be made with the person locally who is to be notified in emergency. With this person the interior can be checked, and if a burglary has occurred the loss can be determined. The time of the burglary sometimes can be fixed within the span of a few hours. This time element can be very important, because a description of missing property, which otherwise might not be reported for several days or even weeks, can be circularized immediately. There will be greater chance of recovery of the property through second hand stores or pawnshops, and through the recovery may come a lead towards identification and apprehension of the burglar.

From a public relations standpoint, the house watch offers a rare opportunity for the police department to win friends and to develop public confidence and support. Through the house watch the police are able to render a visible and positive service to people who otherwise may have very little direct contact with the department. These people, for the most part, make up the "solid citizens" of the community, the people who contribute the most in taxes and yet normally get the least in terms of service and attention. Through the house watch these citizens receive something tangible from their police department. While away from home they

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have a sense of security, knowing that the police are on the job checking the property regularly. To many persons this is extremely important.

Another public relations advantage of the house watch is the opportunity it provides for personal contacts between officers of the police department and citizens of the community. In the course of his duties the beat officer inevitably will be greeted by neighbors of the absent householder. He will become known and he will get to know by name many people in every neighborhood he visits. Children get used to seeing him and recognize him as a friend. In addition, of course, are the contacts with the householder before his departure or after his return, not only with respect to the beat officer, but also the officer at headquarters who receives information by telephone. This officer, by the manner in which he handles these calls, can be a potent force for building good public relations.

There are, of course, numerous problems connected with the operation of the house watch. There are the residents who neglect to order their milk and newspaper deliveries halted. There are those who fail to advise the police that relatives or servants will have access to the property. These people may leave the house in an insecure state, or they may leave evidence of their presence, all of which consumes police time in checking. Long weekends which occur when a holiday falls on Friday or Monday creates a sudden extra load which may be difficult for the police department to absorb. The summer season when most people take their vacations, creates a burden at a time when the maximum number of policemen who can be relieved also are on vacation. Finally, there are some residents who expect service which cannot be performed on an equal basis for all citizens, such as the daily inspection of property that is to be vacant for several months.

Another problem is that unless adequate controls are maintained the beat officer will hasten to make his house checks at the start of his shift, neglecting all other police tasks until he has completed the list. If this is permitted, not only will the entire force be virtually out of service at the same time, but officers will follow a pattern with respect to time and route. A burglar observing the clocklike regularity with which a police car appeared on a given street might be able to identify a target and time his attack between the officer's inspections.

In spite of these problems and objections, the house watch emphasizes the preventive role of the police. It demonstrates that the police are genuinely concerned with keeping crime from happening in the first place, rather than the often dramatized aspect of police work which is the task of solving crimes that have occurred. When a community fully grasps the importance of police preventive measures, and when through satisfactory personal experiences the citizens are convinced that it is paying off in a reduced crime rate, the chief's task of getting the manpower and material to maintain or improve the service is greatly simplified. ★★★

MEDICOLEGAL WORKSHOP

The Department of Legal Medicine of the Medical College of Virginia, Richmond, the Chief Medical Examiner's office, and the Virginia Society of Pathology and Laboratory Medicine sponsored a medicolegal workshop for medical examiners, and interested physicians, March 29 in the Amphi-Theater and Baruch Auditorium of the medical college. The program included direct investigations, with special reference to general examinations of bodies, photographic techniques, and the use of body fluids in medicolegal investigations; discussion of stab and gunshot wounds and special techniques of treatment; and demonstrations of medicolegal autopsy techniques. Information concerning plans for future Workshops may be obtained from Dr. Geoffrey T. Mann, Chairman, Department of Legal Medicine, Medical College of Virginia, Richmond, Va.

DRIVER RESEARCH

Psychiatrists say angry, frustrated persons are most likely to get into trouble in traffic. Some get a sensation of power when behind the wheel and feel like supermen. Dr. Karl Menninger, at the 1956 convention of the American Psychiatric Association in Chicago, said: "Research into the driver himself, what makes him the way he is, on a long-term basis would be of great help. I believe the psychiatrists could come up with the answers to make driving safer."

Social Innovations in Prisons

By Walter A. Lunden

EDITOR'S NOTE: *Dr. Lunden is Professor of Sociology in the Department of Economics and Sociology, Iowa State College, Ames, Iowa, and a well-known researcher in the general area of criminal justice administration. In the following article written exclusively for* POLICE, *Dr. Lunden makes important observations concerning the method and the stages through which obsolete procedures are replaced by the professional approach in modern prison administration.*

IN spite of the fact that bringing about a change or an innovation in a prison is more difficult than moving a graveyard, many new ideas and practices have been incorporated into the prisons in this country. The observer needs only to review the changes which have taken place within the past four or five decades to verify the facts. Not too long ago inmates wore striped uniforms, whereas today, Texas prisoners now wear white trousers and shirts. In some prisons an inmate orchestra plays during the meal in the mess hall. If some of the wardens of the '80's and the '90's could come back from their graves to their old assignments, they could recognize the buildings, but they would be surprised at the changes which have taken place within the walls. In some cases they might come back and find no walls at all.

An innovation, or the acceptance of a new idea, or a practice is a complex procedure in human relations but the process by which it takes place follows a general uniform pattern of thought and action. This is the main import of our discussion. In making this statement, that innovations follow a uniform pattern, it should be made clear at the outset that changes or new practices do not take place at the same time or at the same degree in all prisons for the country as a whole. Some prison wardens have implemented certain changes more readily than others in different sections of the country. Much depends on the region and on the leaders.

THE OPEN AND THE CLOSED PRISONS

In general, innovations take place more rapidly in "open prisons" than in "closed prisons." An "open prison" is one in which the warden, the staff and the state governing board have an "open door" policy to new ideas and practices. The general attitude is that of a willingness to try to make improvements. In contrast to this type of a prison is the closed institution in which the warden, the staff and the policy makers at the state level maintain that a prison is a feudal empire to be administered with little or no concern as to what the public or "outsiders" may think. In this type of a prison there are few, if any, innovations. All this does not mean that the wisdom of experience has no value, but it does mean that sometimes the "Dead Hand of the Past" may bring about senility even in a prison administration.

INNOVATIONS BY CHOICE AND BY FORCE

Apart from these two types of prisons, innovations or changes in ideas and practices may come about by choice from within the prison itself or changes may be forced upon the administration as the result of riots or serious internal disorders. The method of choice has shown to be far better, whereas the latter, of riots, has proven to be costly in terms of life and property. Here it may be said that regardless of how much may be stated at the time of a prison disturbance to the effect that "we are not going to listen to these inmates," innovations and changes have taken place subsequent to the disorders. This process of "being kicked upstairs" into changes is not peculiar to prisons for the same procedure has occurred in other institutions in slightly different forms.

THE NORMAL PROCESS OF INNOVATIONS

The rate and the procedure of adopting innovations depends very largely on what is under consideration. In general, prison administrators will adopt a new tool or a new machine much quicker than they will accept a new method of dealing with or treating inmates. This is natural, for a tool has fewer implications than a new social practice. Here, however, we should not overlook the fact that a mere tool, machine or physical object in a prison, as elsewhere, may be encrusted with certain social involvement. It is a well known fact that people who have become habituated to "chains" sometimes do not know what to do without them. In addition, a new tool or machine may bring about new man-to-man relationships. The individual wash basin with running water, the earphones in each cell, the loudspeaker system, the weekly movies, and many others have created new social relationships in prisons which could not be anticipated. Some innovations, therefore, may be accepted more readily than others, but all changes, whether tools or procedures, are bound up with people and human relationships.

Address: Professor Walter A. Lunden, Department of Economics and Sociology, Iowa State College, Ames, Iowa.

° Based upon an address before the Third Annual Midwest Correctional Institution Workshop at Iowa State College, May 16, 1956.

Inmates of Iowa State Penitiary improve and develop State Parks.

THE STAGES IN ACCEPTING INNOVATIONS[1]

Apart from the above considerations, there is a general uniform series of steps by which innovations come to be accepted in prisons. For sake of simplicity these stages may be divided into five steps.

1. Awareness Stage

A warden or a deputy-warden may become conscious of a situation within a prison and in time aware of a different idea or procedure. The warden may have a limited knowledge of the idea or new practice, but he has learned through some means that a different practice exists. This awareness may be the result of a chance conversation with a fellow warden or the representative of some company with a marketable tool. It may be that the warden has heard of the idea at a national congress or he may have read about it in some publication.

2. The Interest Stage

Once the warden has become aware of his need, he becomes interested and looks for more information. Where he finds his information depends on his area of operation and the resources available to him. If it is a new machine, he calls in his best advisor inside the prison. In other cases he may seek the help of some educational institution or experimental group working with the problem. If there is need for a new hog barn, the natural source of information is the state agricultural college. Here, it is important for the warden to know where to turn when he wants information.

3. The Evaluation Stage

At this stage the warden makes some kind of a comparison between what he needs, and the potential of the new idea or practice. This may involve a detailed examination of all facts or even an inspection trip to some institution where the idea or practice is in operation. This is a common procedure for many newly ap-

Libraries offer books for both relaxation and study. They are well used.

[1] The process of the "five stages" is a modification of the diffusion principle used by G. M. Beal and J. M. Bohlen in *How Farm People Accept New Ideas*, Sp. Report No. 15, Ag. Ex. Service, Iowa State College, Ames, Iowa, 1955.

Inmate sponsored and planned shows are presented at Iowa State Penitentiary.

pointed wardens to make a tour of a number of prisons in the country to become acquainted with practices in other areas.

The inmates at the London Prison Farm, London, Ohio, are given time and encouragement for the development of their creative abilities. On the cover of the inmate magazine J. Martain presents an inmate's conception of prison time.

4. The Trial Stage

At this stage the prison official has made some kind of an evaluation and is willing to try out the tool or the practice on a small scale or within a limited area. These trial balloons vary according to the nature of the innovation. Here also the warden may seek the help of other persons to make a more adequate test of results. In some respects, this "dry run" or "pilot analysis" may require considerable planning in order to assure adequate results.

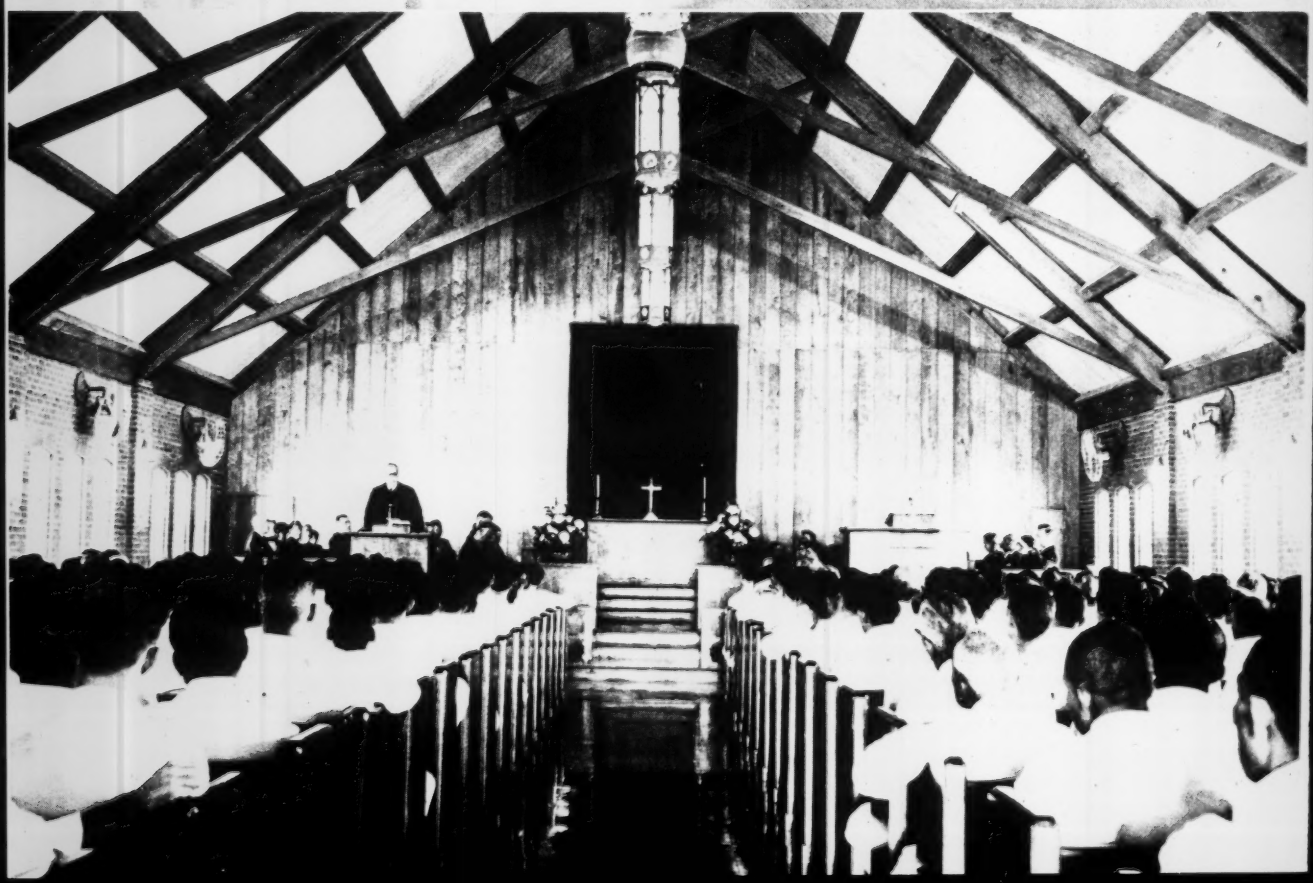
5. Adoption Stage

This is the point at which the warden has proved to himself and to his staff, and others, that the innovation has merit and that it will work. The more successful the trial stage, the more readily will be the adoption.

THE FRAMEWORK IN WHICH INNOVATIONS OCCUR

The acceptance of an innovation depends to a large degree on the social, psychological and economic conditions surrounding the prison. Much depends on the legal and judicial nature of the area. Intramural sports have not and perhaps will not be adopted in European prisons because the thinking and the customs of the people do not approve of such an idea. Again, in contrast, some European prisons do not give additional time or add to an inmate's sentence if he escapes because they feel that if a man is "smart enough" to effect an escape, he should not be penalized for it. It is very doubtful whether such a view would ever be accepted by prison leaders in the United States because of a different outlook in correctional work.

Again, much depends on how the prison and the staff may be related to the community. In one community where the warden was a member of a local service club, certain innovations were brought about because of the "good will" and "understanding" existing between the



ABOVE: *In the U.S. Penitentiary at Atlanta, Georgia, the Classification Committee discusses with a inmate the program designed for his restoration to free society.*
LEFT ABOVE: *The pre-release unit at the U.S. Penitentiary, Atlanta, Georgia, prepares an inmate for release by giving him some opportunity to learn to adjust to normal living.*
LEFT BELOW: *The new prison Chapel in Huntsville, Texas. A number of prisons have built separate chapels for inmate worship much like an average congregation. Here the inmates wear white uniforms instead of the traditional prison garb.*
BELOW: *Prison journalism has come to play an important part in explaining prison problems to persons on the "outside." Almost every large prison has some type of publication which goes to inmates and outside readers.*

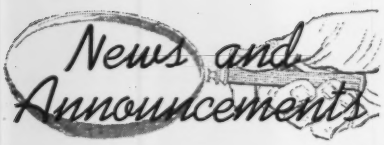
warden and the community leaders. Much, therefore, depends on the man who heads the institution.

At this point it should be stated that not all innovations are good ideas or practices. There are certain "crackpots" and there are "good vessels." The warden must be able to distinguish between one and the other with good grace. Here again, it may be said that what may have been a "crackpot idea" in the past may turn out to be a workable plan in the future. When certain wardens first heard about an inmate "orchestra for prison mess," "a prison newspaper," "a prison library" or even a football game with an outside team, these same wardens may have labeled such an idea as a crackpot notion. Some of the crackpot ideas after due time and some refinement and change have become sound practices.

FROM WHERE COME THE INNOVATIONS

The origin of the innovation depends on what is under consideration. As is to be expected alert wardens and staff officers have affected many desirable changes. Some companies with research facilities available bring about new ideas and practices which, in time, are brought to the attention of prison officials. Many of the innovations in industry in general, have come from research laboratories. Almost every large industry has some type of an experimental plant in operation at all times testing and checking new things. It is to be regretted that the correctional institutions throughout the country have not established some kind of a research plant to test and to try certain ideas and practices relating to prisons. It may be there is need for a new type of foundation for a penalogical testing laboratory.

In the rapidly changing society in which we live all types of institutions are forced to keep pace with changing conditions to keep "alive." An institution can ossify or atrophy if it does not adjust to new situations. The only place where there is little or no change is in the graveyard. ★★★



Fresno State College Expands Law Enforcement Training Program

A graduate program leading to a Master of Science degree in criminology was launched at Fresno State College beginning with the spring semester in February.

Frank Boolsen, department chairman, said students will have an opportunity to specialize in two areas of concentration: law enforcement and correctional work.

A seminar in criminology and a seminar in the techniques of probation and parole was started in the spring for the first enrolled students in the master's program.

Mr. Boolsen conducted the first seminar. The second will be instructed by Charles R. Guthrie, an assistant professor of criminology. Guthrie, who is completing doctoral work at the University of Southern California, joined the Fresno State College criminology faculty this year.

Traffic—A Problem

As the traffic problem grows in scope and intensity, it calls for a corresponding growth of administrative resources and resourcefulness. We see the need for improved driver education, for better traffic ordinances, for sharpened awareness on the part of the public of the significance of traffic accidents, for intelligent public support of more stringent traffic court procedures, and for a general exertion of pressure through wise enforcement. This is a problem requiring a many-faceted approach—flexible, yet determined. Russell E. McClure, *President, International City Managers Association.*

Police Car Rentals

Columbia, Tennessee, and Newport, Rhode Island, are renting police cars under lease agreements with local automobile dealers. Columbia has leased two four-door cars at $120 per month for the first 12 months. The city then has an option to renew the lease for the next six months at $90 per month per car and for the following six months at $80 per month per car. The automobile agency provides all mechanical repairs and service, oil changes, and lubrication. The city pays for any damage to cars as a result of an accident and carries insurance under a fleet liability policy. The Newport agreement calls for three two-door, eight-cylinder police cars at a rental of $135 per month for a period of one year. The city agrees to pay for gasoline, collision and liability insurance, and the cost of transferring and maintaining all radio and police equipment for the cars. The auto agency furnishes all maintenance and repairs, except gasoline, and furnishes grease and motor oil.

Public Management, February, 1957.

Time Saved?

Cliff Bergere, Indianapolis Speedway veteran recently drove a 15-block test in Colorado Springs with Captain Cecil Caldwell of the Police Department as his passenger. They covered the route in 9 minutes, 34.5 seconds while observing every traffic regulation. Then they covered the same route driving as rapidly as possible. They broke 52 laws. The difference in time between the safe driving and the reckless driving was 3.9 seconds. Unless you're a racing driver and need to save four seconds—why worry? *Traffic Digest and Review.*

International Association of Auto Theft Investigators to Hold 1957 Seminar

Automobile theft investigators of the nation will assemble in Fort Worth, Texas, for an important four day Conference August 19, 21, 22, and 23. Registration of delegates will be held on the afternoon of August 18. Presiding over the Seminar will be President A. T. Nelson, Commanding the Automobile Theft Division of the Los Angeles Police Department. The opening address will be delivered by Colonel Homer Garrison, noted police administrator and Director of the Texas Department of Public Safety.

The content of the program merits a record attendance. On-the-job facts and information to be presented on this occasion, include: *Vehicle Locks and Numbers,* by W. F. Sherman, Manager, Engineering and Technical Department, Automobile Manufacturers Association, Detroit; *Police Records,* by W. A. Campbell, Univac Division of Remington Rand; *The Role of the Traffic Officer in Auto Theft,* by C. G. Conner, Assistant Chief, Texas Highway Patrol; *Juvenile Auto Theft,* by Chief C. F. Hansson of the Dallas Police Department; and *The Dyer Act,* by W. A. Murphy, Special Agent in Charge of the Dallas Office of the Federal Bureau of Investigation.

1957 Annual Seminar Convention of the ACADEMY FOR SCIENTIFIC INTERROGATION Hot Springs, Arkansas August 21-23, 1957

Pointed still further toward the techniques of automobile theft investigation are a number of panel workshops, including: *Vehicle and Title Registration,* Moderator—Archie M. Gilbert, Director, License and Theft Enforcement, Department of Motor Vehicles, Raleigh, N. C.; *International Panel,* Moderator—Charles S. Black, National Automobile Theft Bureau, New York City; *Reporting and Auto Theft Records,* Moderator—Glen H. McLaughlin, Chief, Bureau of Identification and Records, Texas Department of Public Safety; *Spotting, Tracing and Identifying Stolen Vehicles,* Moderator—James R. Sullivan, Special Agent, National Automobile Theft Bureau, Oklahoma City; *Auto Theft and the Juvenile,* Moderator—Lieutenant Clyde W. Oliver, Vehicle Investigation Section, Illinois State Police; *Auto Accessory Theft and Theft From Automobile,* Moderator—Captain A. T. Nelson, Commanding, Automobile Theft Division, Los Angeles Police Department; *Public Relations and Theft Prevention,* Moderator—Lieutenant H. D. Brigham, Auto Theft and Information Bureau, Missouri State Highway Patrol; and *Investigative Techniques and Commercial Auto Theft,* Moderator—W. A. Murphy, Special Agent in Charge of the Dallas Office of the Federal Bureau of Investigation. A special feature of the Conference will be an address, *The I.A.A.T.I. Past and Future,* by C. C. Benson, Manager, Texas Division, National Automobile Theft Bureau.

Patrolman's Ingenuity Pays Off Two Ways

All 825 of the New York City Police Department's radio patrol cars will be available for chasing speeders within two weeks because of a young patrolman's ingenuity.

Heretofore, only the 200 cars and the 125 motorcycles of the Traffic Division could make a speeding summons "stick," for they were the only vehicles with properly calibrated speedometers. Patrolman must support speeding ar-

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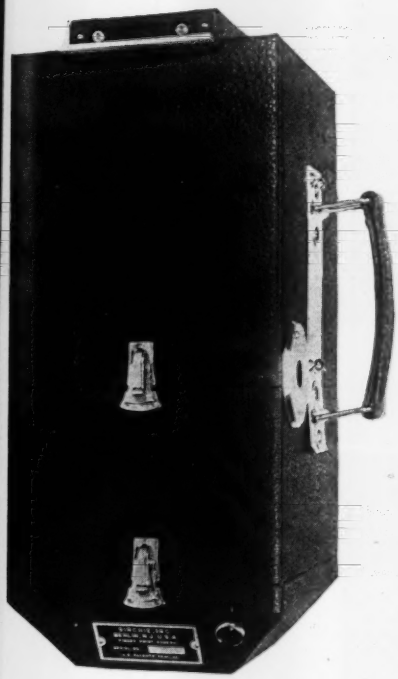

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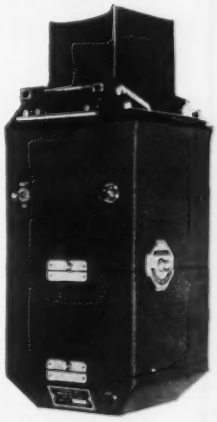

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rests in court with evidence of speedometer accuracy that must be checked every fifteen days.

The process was involved and the cars formerly had to be sent to a company specializing in the technique. Now, George DeNyse, a motorcycle patrolman, has perfected a roller cradle device that quickly calibrates speedometers. Three of the new machines have been installed at police garages.

Patrolman DeNyse has received an award of $500 from the city and a citation from Mayor Wagner.

Good Vision Care Studied

Thirty-eight million Americans who need vision care are not getting it, according to a new statistical study of "Group Vision Care Programs" just completed by the American Optometric Association.

Forty-two per cent of all Americans have normal vision, requiring no correction, 30% are receiving adequate care; 5% have uncorrectable vision problems; 10% are wearing lenses unsuited to their present vision; and 13% have vision problems that have been totally neglected.

The report summarizes findings from more than fifty sources on coverage, cost and usage of vision care. It was released here today at the 59th Annual Congress of the Association.

The purpose of the report, according to Dr. F. A. Koetting, St. Louis, Chairman of the Association's Committee on Social and Health Care Trends, is to provide information to public agencies, insurance companies, employers, labor unions, and others interested in group vision care programs. He said that the Association seeks neither to encourage nor discourage group plans, but rather to assure the highest quality of vision care through optometric participation where group plans are adopted.

"Optometrists, according to widespread studies, perform 75% of all vision examinations in the United States, compared to 25% by ophthalmologists and other physicians," Doctor Koetting said. "It is imperative then for us to assist in the planning, and operation when group health programs, usually medical, are expanded to cover vision care."

Dr. Koetting said that a major handicap to the growth of group vision care programs is lack of statistical information on probable usage and cost. His committee's report is designed to provide answers to the most frequently raised questions.

The typical wearer of glasses has his eyes examined once every thirty-four months, according to surveys covering thousands of persons who have had three or more examinations. The Association recommends a yearly examination for children, and the interval between adult examinations to be no greater than twenty-four months. One out of every eight persons examined by optometrists is dismissed with the report that he needs no correction, or that his glasses are satisfactory.

The Association found wide variation in costs, and reported a survey in one large midwest city showing an average of $27.70 for complete vision care with single vision lenses, $38.90 with bifocals, and $44.00 with trifocals.

The experience shown in the report indicates that subscribers to prepayment and group plans do not seek vision care in health centers in ratio to their needs. Many ignore the established facilities for which they have paid, to seek vision care elsewhere. Doctor Koetting said that this was probably due to inaccessibility of some health centers, no choice of doctor and a reputation for inferior service in cut-rate plans.

EDITOR

Scholarships Available to New York Police for College Preparation

Police Commissioner Stephen P. Kennedy has announced the establishment of twenty scholarships of $250 each—totaling $5,000—to be used for the benefit of members of the New York City Police Department who are attending or are about to attend the Police Academy-Baruch School, Associate in Applied Science Police Science Program.

A check covering the total cost of the scholarships was presented on April 9, to Police Commissioner Kennedy by Gordon Knox Bell, President, and Sheridan A. Logan, Secretary of the Riot Relief Fund, in a ceremony in the Board Room at Police Headquarters. The Riot Relief Fund was created in 1863 by Leonard Jerome, grandfather of Winston Churchill, Isaac Bell, and other civic-minded citizens who were shocked at that time to learn that there were no funds available for the families of heroic policemen killed while attempting to maintain law and order during the Civil War draft riots in New York City. The fund has since assisted widows and dependents of police officers killed in the line of duty.

Now, for the first time, the descendants of the founders of the fund have expanded its use to enable deserving and competent policemen to obtain educational opportunities in their chosen profession—police science. The trustees of the fund, in addition to Mr. Bell and Mr. Logan, Eliot Tuckerman, Rector K. Fox, Judge Charles S. Whitman, Jr., and Peter M. Brown, believe that the creation of these scholarships will provide the impetus to focus attention on a major police goal—professionalization, and the development in the future leadership of the department of skills, knowledge and

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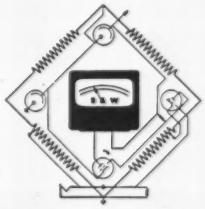

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attitudes on a par with other professions.

Seven hundred and seventy nine members of the Police Department are currently enrolled in the Police Science Program. These men attend school on their time off duty and make the necessary cash outlays for registration, tuition fees and textbooks from their personal funds. The scholarships will enable twenty specially selected members of the force to participate in the Police Science Program of study and preparation.

Short—But to the Point

Noreen Hopkins, postmaster at Story, Wyoming (pop. 300), tells of the sign that is posted where you enter her small mountain town. It reads: SLOW—NO HOSPITAL. An effective safety message in a few words.

—*Safe Driver*

DO YOU READ AND WRITE FRENCH, GERMAN, ITALIAN, OR SPANISH?

The Journal is interested in publishing abstracts of a number of important articles appearing in foreign police journals and the Editor invites inquiry from qualified persons who would be willing to cooperate in their preparation. Address correspondence to V. A. Leonard, Editor, P. O. Box 837, College Station, Pullman, Washington.

EDITOR

Evidence?

Perhaps the ultimate in absurdity was reached in a Los Angeles hearing on an order to show cause against Big Ed Gardenia, professional wrestler. The mother of a seventeen month old child charged that Gardenia was the father; and he was ordered to remove his shoe and sock when the plaintiff charged that the second toes of both the child and Gardenia were longer than their great toes. Since this case, an unofficial, unscientific poll of toes showed approximately 70 per cent of persons examined were guilty of having second toes which are longer than their great ones. (Courtesy, *Los Angeles Times.*)

(From Houts, Marshall: *From Evidence to Proof.*)

HONOLULU POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU
HONOLULU 13, HAWAII

OUR REFERENCE
YOUR REFERENCE

May 1, 1957

ADDRESS ALL COMMUNICATIONS TO DANIEL S. C. LIU CHIEF OF POLICE

Dear Associate and Fellow Member of the IACP and Family:

May I take this means of renewing our most cordial invitation to visit Hawaii upon the occasion of the 64th IACP Conference scheduled for Honolulu, September 29 through October 3. It will be an unparalleled opportunity to combine a vacation in the "Paradise of the Pacific" with attendance at the Conference.

Hawaii is most desirous of having you as a guest, and the Honolulu Police Department, as your host, will dedicate itself toward making your Convention and your visit to Hawaii a most memorable one. Judging from the unfailing enthusiasm of lady visitors here, your wives will regard a chance to visit Hawaii as the opportunity of a lifetime.

Whether you arrive by steamer or plane you will be welcomed in the true Hawaiian spirit of "Aloha." A veritable paradise filled with music, gaiety and friendliness is yours to enjoy every minute of your stay. Exotic foods, the bewitching fragrance of beautiful flowers, caressing tropical breezes, waving coconut palms and enchanting moonlight nights will long linger in your pleasant memories. Beautiful Hawaiian hula dances and the haunting refrains of native melodies will become a part of you; and you will want to sun on the sands, and swim and surf in the warm, inviting waters of Waikiki. Nature is at its best and in its glory as Hawaii basks under the azure skies of the blue Pacific.

You will respond to new experiences in Internationalism, for here in Hawaii the peoples of the Occident, Orient and the South Seas live in a spirit of goodwill and blend their cultures in mutual advantage and genuine harmony. A prominent visitor in Hawaii recently put it--"You have here the only community under the American Flag where a visitor has the security of feeling that he is at home, with all of the conveniences of home and yet can experience a delightful foreign atmosphere."

A most worth-while training and conference program is being planned by our Washington headquarters, and as your host, I have the great privilege of already having planned for a program of sightseeing and other entertainment which will make your visit a most memorable one. Never-to-be-forgotten attractions planned for your enjoyment include gala International festivities, special Polynesian pageantries, a Hawaiian Luau (native feast), and exotic foods of the Islands.

Sightseeing trips include a Pearl Harbor tour with visit to the shrine of the sunken U.S.S. Arizona, through courtesy of our United States Navy, Pacific National Cemetery, Pineapple and Sugar plantations, beautiful private homes and gardens and various Waikiki activities.

Through the courtesy of the Commanding General, United States Army, Pacific, a special review in honor of the IACP will be staged by the 25th Infantry Division, U. S. Army. This is the newly reorganized division under a new Pentomic structure designed for greater mobility in atomic war.

We assure you of our gracious hospitality. "Aloha E Na Hoaloha. E Hele Mai Nou O Hawaii." (Aloha, friends. Come over - Hawaii is yours).

DAN LIU
Chief of Police

FLORIDA CHECKS ON ALL VISITING FELONS

Tallahassee, Fla., May 1—Gov. LeRoy Collins signed a bill today designed to help the Florida police keep a check on criminals posing as tourists. The law requires a convicted felon to register with the sheriff within forty-eight hours after entering any Florida County, or to register with the State Sheriff's Bureau in Tallahassee.

Failure to do so would carry a maximum penalty of a $500 fine or six months in jail. Backers of the law said it was designed to check up on criminals who came to Florida's lower East Coast tourist resorts in the winter season.

VETERANS FORFEIT PENSIONS DURING IMPRISONMENT

Veterans imprisoned after conviction of a felony or a misdemeanor will not be entitled to Veterans Administration pensions for that part of their sentence which exceeds 60 days, VA announced today. Public Law 85-24, effective June 1, 1957, prohibits such payments, VA added.

Pension payments are made only to wartime veterans or their eligible dependents for disability or death not connected with the veterans' service. Not affected by the new law are compensation payments made to veterans or their survivors for disability or death incurred as a result of either wartime or peacetime service, VA emphasized.

Imprisonment periods of less than 61 days, or of any length before actual conviction, will not stop pension payments, VA said. To prevent hardships, the law provides that VA may pay pension to the eligible wife or children of a veteran who forfeits his own pension during imprisonment.

VA pension being received by a veteran's widow is forfeited for her period of imprisonment greater than 60 days. However, if she has eligible children, payment may be made on their behalf, VA pointed out. The 60-day rule also applies, VA said, to any part of a pension being paid on behalf of a child under similar circumstances.

VA said that resumption of payment of pension may be made after the person's release from incarceration. Enforcement of the new law will be carried out by VA with the cooperation of Federal, state, county, and city law enforcement and penal authorities, VA said.—From the office of the Director of Information, Veterans Administration, Washington 25, D. C.

EDITOR'S NOTE: *The Veterans Administration requests the cooperation of all law enforcement officers generally by furnishing the nearest VA office with the names of imprisoned pensioners and their VA claim number, if known. If the claim number is not known, the prisoner's full name, last known address, date of birth, his period of military or naval service will assist in identifying the claim file.*

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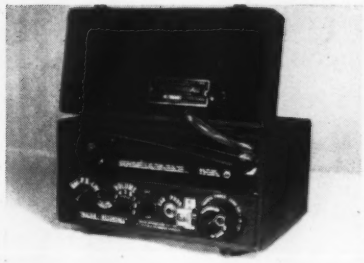

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